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File 34:SCISEARCH 1988 - 9202W2
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**FILE034: See also file 434: Complete, merged SciSearch File
**Includes abstracts as of 1991

Set	Items	Description

? s cr=smith db, 1988, v67, p31, gene

S1 267 CR=SMITH DB, 1988, V67, P31, GENE
? t 1/7/all

1/7/1
11339712 Genuine Article#: HB535 Number of References: 44
Title: T-CELL ACTIVATION-INDUCING EPITOPES OF THE HOUSE DUST MITE ALLERGEN DER-P-I - PROLIFERATION AND LYMPHOKINE PRODUCTION PATTERNS BY DER-P-I-SPECIFIC CD4+ T-CELL CLONES
Author(s): YSSEL H; JOHNSON KE; SCHNEIDER PV; WIDEMAN J; TERR A; KASTELEIN R; DEVRIES JE
Corporate Source: DNAX RES INST MOLEC & CELLULAR BIOL INC,MOLEC &CELLULAR BIOL RES INST,DEPT HUMAN IMMUNOL/PALO ALTO//CA/94304; STANFORD ALLERGY CLIN/STANFORD//CA/94304
Journal: JOURNAL OF IMMUNOLOGY, 1992, V148, N3 (FEB 1), P738-745
Language: ENGLISH Document Type: ARTICLE
Abstract: Cloned human CD4+ T cell lines specific for the house dust mite Dermatophagoides pteronyssinus were used to map minimal T cell activation-inducing epitopes on the Group I allergen in D. pteronyssinus extracts (Der p I) molecule. Most of these Der p I-specific T cell clones expressed different TCR V-alpha and V-beta gene products. Using recombinant deletion proteins, three T cell epitopes were identified on the Der p I molecule; p45-67 and p117-143 were recognized by HLA-DR7-restricted T cells, whereas p94-104 was recognized in the context of HLA-DR2, -DRw11 (DR5), and -DR8 molecules. This degenerate class II MHC restriction appears to be due to shared Phe and Asp residues at positions 67 and 70, respectively, in the third variable domain of the HLA-DR-beta chain. All three T cell epitopes induced Th2-like cytokine production profiles by the Der p I-specific T cell clones, which were characterized by the production of very high levels of IL-4 and IL-5, as compared with those secreted by tetanus toxin-specific T cell clones derived from the same patients, but no or low amounts of IL-2 and IFN-gamma. This Th2-like production profile was, however, not an intrinsic property of the Der p I-specific T cells, but was dependent upon their mode of activation. Stimulation with Con A also induced very low or no measurable levels of IL-2 and IFN-gamma, whereas activation with TPA and the calcium ionophore A23187

resulted in the production of high levels of IL-4, IL-5, IL-2, and IFN-gamma. These results indicate that Der p I-specific T cell clones are not defective in their capacity to produce high levels of Th1 cytokines.

1/7/2
11332383 Genuine Article#: HA564 Number of References: 52
Title: INDUCTION OF PROLIFERATIVE RESPONSES OF T-CELLS FROM BABESIA-BOVIS-IMMUNE CATTLE WITH A RECOMBINANT 77-KILODALTON MEROZOITE PROTEIN (BB-1)
Author(s): TETZLAFF CL; RICEFICHT AC; WOODS VM; BROWN WC
Corporate Source: TEXAS A&M UNIV SYST,DEPT VET PATHOBIOL/COLLEGE STN//TX/77843; TEXAS A&M UNIV SYST,DEPT VET PATHOBIOL/COLLEGE STN//TX/77843; TEXAS A&M UNIV SYST,DEPT MED BIOCHEM & GENET/COLLEGE STN//TX/77843
Journal: INFECTION AND IMMUNITY, 1992, V60, N2 (FEB), P644-652
Language: ENGLISH Document Type: ARTICLE
Abstract: A major portion of a Babesia bovis-specific gene encoding a 77-kDa merozoite protein (Bb-1) produced during natural infection in cattle and in microaerophilous culture was subcloned into the pGEX1N expression vector. Recombinant Bb-1 protein fused to glutathione S-transferase (Bb-1-GST) was used to examine cellular immune responses in B. bovis-immune cattle. Sera from rabbits immunized with Bb-1-GST reacted with fusion protein and with the native antigen present in crude B. bovis but not with B. bigemina merozoites. Bb-1-GST but not GST induced strong proliferation of T lymphocytes from these immune cattle, and Bb-1-reactive T-cell lines which consisted of a mixed population of either CD4+ and CD8+ cells or CD4+, CD8+, and "null" (gamma-delta-T) cells were established by in vitro stimulation of peripheral blood mononuclear cells with the recombinant fusion protein. Three CD4+ CD8- and three CD4- CD8+ Bb-1-specific T-cell clones were identified after limiting-dilution cloning of the cell lines. The studies described here demonstrate that the 77-kDa protein of B. bovis contains T-cell epitopes capable of eliciting proliferation of two types of T cells in immune cattle, an important consideration for the design of a recombinant subunit vaccine.

1/7/3
11332282 Genuine Article#: HB066 Number of References: 88
Title: PROTEIN TYROSINE PHOSPHATASE CONTAINING SH2 DOMAINS - CHARACTERIZATION, PREFERENTIAL EXPRESSION IN HEMATOPOIETIC-CELLS, AND LOCALIZATION TO HUMAN-CHROMOSOME 12P12-P13
Author(s): YI TL; CLEVELAND JL; IHLE JN
Corporate Source: ST JUDE CHILDRENS HOSP,DEPT BIOCHEM,332 N LAUDERDALE/MEMPHIS//TN/38105; ST JUDE CHILDRENS HOSP,DEPT BIOCHEM,332 N LAUDERDALE/MEMPHIS//TN/38105
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1992, V12, N2 (FEB), P836-846
Language: ENGLISH Document Type: ARTICLE
Abstract: Protein tyrosine phosphorylation has been implicated in the growth and functional responses of hematopoietic cells. Recently, approaches have been developed to characterize the protein tyrosine phosphatases that may contribute to regulation of protein tyrosine phosphorylation. One novel protein tyrosine phosphatase was expressed predominantly in hematopoietic cells. Hematopoietic cell phosphatase encodes a 68-kDa protein that contains a single phosphatase conserved domain. Unlike other known protein tyrosine phosphatases, hematopoietic cell phosphatase contains two src homology 2 domains. We also cloned the human homolog, which has 95% amino acid sequence

identity. Both the murine and human gene products have tyrosine-specific phosphatase activity, and both are expressed predominantly in hematopoietic cells. Importantly, the human gene maps to chromosome 12 region p12-p13. This region is associated with rearrangements in approximately 10% of cases of acute lymphocytic leukemia in children.

1/7/4
11332272 Genuine Article#: HB066 Number of References: 36
Title: FUNCTIONALLY DISTINCT ISOFORMS OF THE CRE-BP DNA-BINDING PROTEIN MEDIATE ACTIVITY OF A T-CELL-SPECIFIC ENHANCER
Author(s): GEORGOPOULOS K; MORGAN BA; MOORE DD
Corporate Source: MASSACHUSETTS GEN HOSP,DEPT MOLEC BIOL/BOSTON//MA/02114; MASSACHUSETTS GEN HOSP,CUTANEOUS BIOL RES CTR/BOSTON//MA/02114; HARVARD UNIV,SCH MED,DEPT GENET/BOSTON//MA/02115
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1992, V12, N2 (FEB), P747-757
Language: ENGLISH Document Type: ARTICLE
Abstract: Expression of the CD3-delta gene of the T-cell receptor (TCR) complex is regulated by a T-cell-specific enhancer. A highly conserved 40-bp motif (element delta-A) within the CD3-delta enhancer is responsible for mediating its activity and specificity. Element delta-A exhibits sequence similarities to the cyclic AMP response element (CRE) but does not respond to changes in the level of cyclic AMP. Using the delta-A element as a probe, we have isolated three cDNA clones encoding three distinct protein isoforms, products of differential splicing and alternate promoter usage of the CRE-BP gene. These isoforms share the DNA binding and dimerization domains at the C terminus of the protein but differ at their N termini. In transfection assays, their activities as transcription regulators differ: CRE-BP2 is a potent activator, CRE-BP3 is a weak activator, and CRE-BP1 is transcriptionally inert. Mutations in the basic region of the CRE-BP1 protein which abrogate its ability to bind DNA render this protein a dominant repressor of the delta-A enhancer. Antibodies to the CRE-BP protein interact specifically with the ubiquitous and predominantly T-cell-restricted nuclear complexes that bind to the delta-A element and suggest the presence of this protein in homo- and heterodimeric complexes. Since the delta-A motif is also present in the enhancer and promoter of the TCR alpha and beta-genes, the CRE-BP isoforms may mediate expression of other members of the CD3/TCR complex during T-cell development.

1/7/5
11332262 Genuine Article#: HB066 Number of References: 48
Title: SEQUENTIAL EXPRESSION OF MULTIPLE POU PROTEINS DURING AMPHIBIAN EARLY DEVELOPMENT
Author(s): HINKLEY CS; MARTIN JF; LEIBHAM D; PERRY M
Corporate Source: UNIV TEXAS,MD ANDERSON CANCER CTR,DEPT BIOCHEM & MOLEC BIOL,1515 HOLCOMBE BLVD/HOUSTON//TX/77030; UNIV TEXAS,MD ANDERSON CANCER CTR,DEPT BIOCHEM & MOLEC BIOL,1515 HOLCOMBE BLVD/HOUSTON//TX/77030
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1992, V12, N2 (FEB), P638-649
Language: ENGLISH Document Type: ARTICLE
Abstract: The octamer motif is a common cis-acting regulatory element that functions in the transcriptional control regions of diverse genes and in viral origins of replication. The ability of a consensus octamer motif to stimulate transcription of a histone H2B promoter in frog oocytes suggests that oocytes contain a transcriptionally active octamer-binding protein(s). We show here that frog oocytes and

developing embryos contain multiple octamer-binding proteins that are expressed in a sequential manner during early development. Sequences encoding three novel octamer binding-proteins were isolated from Xenopus cDNA libraries by virtue of their homology with the DNA binding (POU) domain of Oct-1. The predicted POU domains of these proteins were most highly related to mammalian Oct-3 (also termed Oct-4), a germ line-specific gene required for mouse early development. Transcripts from these amphibian POU-domain genes were most abundant during early embryogenesis and absent from most adult somatic tissues. One of the genes, termed Oct-60, was primarily expressed as a maternal transcript localized in the animal hemisphere in mature oocytes. The protein encoded by this gene was present in oocytes and early embryos until the gastrula stage of development. Transcripts from a second POU-domain gene, Oct-25, were present at low levels in oocytes and early embryos and were dramatically upregulated during early gastrulation. In contrast to the Oct-60 mRNA, translation of Oct-25 mRNA appeared to be developmentally regulated, since the corresponding protein was detected in embryos during gastrulation but not in oocytes or rapidly cleaving embryos. Transcripts from the third POU protein gene, Oct-91, were induced after the midblastula transition and reached their highest levels of accumulation during late gastrulation. The expression of all three genes decreased during late gastrulation and early neurulation. By analogy with other members of the POU-domain gene family, the products of these genes may play critical roles in the determination of cell fate and the regulation of cell proliferation.

1/7/6
11332259 Genuine Article#: HB066 Number of References: 60
Title: POINT MUTATIONS IN THE ABL SH2 DOMAIN COORDINATELY IMPAIR PHOSPHOTYROSINE BINDING INVITRO AND TRANSFORMING ACTIVITY INVIVO
Author(s): MAYER BJ; JACKSON PK; VANETTEN RA; BALTIMORE D
Corporate Source: ROCKEFELLER UNIV,1230 YORK AVE/NEW YORK//NY/10021; ROCKEFELLER UNIV,1230 YORK AVE/NEW YORK//NY/10021; WHITEHEAD INST BIOMED RES/CAMBRIDGE//MA/02142
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1992, V12, N2 (FEB), P609-618
Language: ENGLISH Document Type: ARTICLE
Abstract: We have constructed a series of point mutations in the highly conserved FLVRES motif of the src homology 2 (SH2) domain of the abl tyrosine kinase. Mutant SH2 domains were expressed in bacteria, and their ability to bind to tyrosine-phosphorylated proteins was examined in vitro. Three mutants were greatly reduced in their ability to bind both phosphotyrosine itself and tyrosine-phosphorylated cellular proteins. All of the mutants that retained activity bound to the same set of tyrosine-phosphorylated proteins as did the wild type, suggesting that binding specificity was unaffected. These results implicate the FLVRES motif in direct binding to phosphotyrosine. When the mutant SH2 domains were inserted into an activated abl kinase and expressed in murine fibroblasts, decreased in vitro phosphotyrosine binding correlated with decreased transforming ability. This finding implies that SH2-phosphotyrosine interactions are involved in transmission of positive growth signals by the nonreceptor tyrosine kinases, most likely via the assembly of multiprotein complexes with other tyrosine-phosphorylated proteins.

1/7/7
11332253 Genuine Article#: HB066 Number of References: 72
Title: THE OCT-1 POU DOMAIN MEDIATES INTERACTIONS BETWEEN OCT-1 AND OTHER POU PROTEINS

Author(s): VERRIJZER CP; VANOOSTERHOUT JAWM; VANDERVLIET PC
Corporate Source: UNIV UTRECHT,PHYSIOL CHEM LAB,VONDELLAAN 24A/3521 GG UTRECHT//NETHERLANDS/; UNIV UTRECHT,PHYSIOL CHEM LAB,VONDELLAAN 24A/3521 GG UTRECHT//NETHERLANDS/
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1992, V12, N2 (FEB), P542-551
Language: ENGLISH Document Type: ARTICLE
Abstract: The POU domain is the conserved DNA binding domain of a family of gene regulatory proteins. It consists of a POU-specific domain and a POU homeodomain, connected by a variable linker region. Oct-1 is a ubiquitously expressed POU domain transcription factor. It binds to the canonical octamer sequence (ATGCAAAT) as a monomer. Here we show by chemical cross-linking and protein affinity chromatography that the Oct-1 POU domain monomers can interact in solution. This association requires both the POU homeodomain and the POU-specific domain. The interaction is transient in solution and can be stabilized by binding to the heptamer-octamer sequence in the immunoglobulin heavy-chain promoter. This correlates with cooperative DNA binding to this site. POU proteins from different subclasses, including Oct-1, Oct-2A, Oct-6, and a chimeric Oct-1 protein containing the Pit-1 POU domain, can bind cooperatively to a double binding site and form a heteromeric complex.

1/7/8
11331466 Genuine Article#: HA780 Number of References: 35
Title: BACULOVIRUS-MEDIATED EXPRESSION AND CHARACTERIZATION OF RAT GLYCOGEN-SYNTHASE KINASE-3-BETA, THE MAMMALIAN HOMOLOG OF THE DROSOPHILA-MELANOGASTER-ZESTE-WHITE3SGG HOMEOTIC GENE-PRODUCT
Author(s): HUGHES K; PULVERER BJ; THEOCHAROUS P; WOODGETT JR
Corporate Source: LUDWIG INST CANC RES,COURTAULD BLDG,91 RIDING HOUSE ST/LONDON W1P 8BT//ENGLAND/
Journal: EUROPEAN JOURNAL OF BIOCHEMISTRY, 1992, V203, N1-2 (JAN 15), P 305-311
Language: ENGLISH Document Type: ARTICLE
Abstract: Molecular cloning of glycogen synthase kinase-3 (GSK-3) has demonstrated the existence of a novel form, termed GSK-3-beta, which is highly related to the well characterised GSK-3-alpha protein but derived from a distinct gene. The cDNA cloning also revealed a striking degree of amino acid identity between the two GSK-3 proteins, particularly the beta-form, and the zeste-white3/shaggy (zw3sgg) homeotic gene of Drosophila melanogaster. Abrogation of zw3sgg causes pleiotropic effects on fruitfly development affecting segmental organisation and cell fate determination. In view of the potential importance of GSK-3-beta in mammalian development and the lack of previous characterisation, we have expressed this protein in insect cells using recombinant baculovirus. A rapid purification scheme has been developed yielding essentially pure GSK-3-beta protein in three chromatographic steps. The protein has autonomous protein kinase activity and similar, but not identical, substrate preferences to GSK-3-alpha. Both GSK-3 proteins activate the MgATP-dependent form of protein phosphatase-1 and thus display 'factor A' activity. Since GSK-3-beta exhibits an identical site specificity to GSK-3-alpha with respect to phosphorylation of the proto-oncogene/transcription factors c-jun and c-myc, it is likely that the Drosophila zw3sgg protein kinase has a similar specificity for such transcription factors which may underlie the pleiotropic phenotypes observed when the Drosophila homologue is mutationally inactivated.

1/7/9
11328131 Genuine Article#: HB530 Number of References: 29

Title: RETINOID X-RECEPTOR IS AN AUXILIARY PROTEIN FOR THYROID-HORMONE AND RETINOIC ACID RECEPTORS
Author(s): ZHANG XK; HOFFMANN B; TRAN PBV; GRAUPNER G; PFAHL M
Corporate Source: LA JOLLA CANC RES FDN,CTR CANC/LA JOLLA//CA/92037; LA JOLLA CANC RES FDN,CTR CANC/LA JOLLA//CA/92037
Journal: NATURE, 1992, V355, N6359 (JAN 30), P441-446
Language: ENGLISH Document Type: ARTICLE
Abstract: THYROID hormones and retinoic acid function through nuclear receptors that belong to the steroid/thyroid-hormone receptor superfamily (reviewed in refs 1-4). Thyroid hormone receptors (TRs) and retinoic acid receptors (RARs) require auxiliary nuclear proteins for efficient DNA binding 5-10. Here we report that retinoid X receptors RXR-alpha (ref. 11) is one of these nuclear proteins. RXR-alpha interacts both with TRs and with RARs, forming heterodimers in solution that strongly interact with a variety of T3/retinoic acid response elements. Transfection experiments show that RXR-alpha can greatly enhance the transcriptional activity of TR and RAR at low retinoic acid concentrations that do not significantly activate RXR-alpha itself. Thus, RXR-alpha enhances the transcriptional activity of other receptors and its own ligand sensitivity by heterodimer formation. Our studies reveal a new subclass of receptors and a regulatory pathway controlling nuclear receptor activities by heterodimer formation.

1/7/10
11320962 Genuine Article#: HA485 Number of References: 60
Title: THE PURIFICATION OF A RAP1 GTPASE-ACTIVATING PROTEIN FROM BOVINE BRAIN CYTOSOL
Author(s): NICE EC; FABRI L; HAMMACHER A; HOLDEN J; SIMPSON RJ; BURGESS AW
Corporate Source: LUDWIG INST CANC RES,MELBOURNE TUMOUR BIOL BRANCH/VICTORIA 3050//AUSTRALIA/; LUDWIG INST CANC RES,JOINT PROT STRUCT LAB/VICTORIA 3050//AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1992, V267, N3 (JAN 25), P 1546-1553
Language: ENGLISH Document Type: ARTICLE
Abstract: Two GTPase-activating proteins (GAPs) have been detected in extracts from bovine brain: GAP-1, which is specific for the activation of ras GTPases, and GAP-3, which is specific for the activation of the rap1 GTPases. We present a strategy for the purification to homogeneity of a cytosolic form of GAP-3 from bovine brain. The 100,000 x g supernatant from homogenized brains was chromatographed sequentially on DEAE Fast Flow, green H-E4BD Sepharose, Bio-Gel A1.5, hydroxyapatite, and phenyl-Sepharose prior to high resolution separation on Mono Q HR 5/5, phenyl-Superose HR 5/5, Mono Q PC 1.6/5, and Superose 12 PC 3.2/30. This procedure resulted in an approximately 18,000-fold purification, yielding 50-mu-g of GAP-3 from 1.6 kg of tissue. Purified cytosolic GAP-3 migrated as a single band of apparent M(r) 55,000 on sodium dodecyl sulfate-polyacrylamide gel electrophoresis. However, on gel filtration cytosolic GAP-3 chromatographed as a dimer with an apparent M(r) 92,000. Purified GAP-3 does not activate ras or rho GTPases and possesses no intrinsic GTPase activity. Amino acid sequence data indicated a proline-rich N terminus. The amino acid sequences of peptides generated by Staphylococcus aureus V8 digestion of reduced and pyridine-ethylated GAP-3 showed no similarity to the predicted primary structure of GAP-1 or any other proteins in the nucleic acid or protein data bases. By comparison with the data of Rubinfeld et al. (Rubinfeld, B., Munemitsu, S., Clark, R., Conroy, L., Watt, K., Crosier, W. J., McCormick, F., and Polakis, P. (1991) Cell 65, 1033-1042), it appears

that the membrane-associated (M(r) 85,000-95,000) and cytosolic forms of GAP-3 are derived from equivalent, or closely related, genes.

1/7/11
11320942 Genuine Article#: HA485 Number of References: 34
Title: ISOPRENYLATION OF A PROTEIN-KINASE - REQUIREMENT OF FARNESYLATION ALPHA-CARBOXYL METHYLATION FOR FULL ENZYMATIC-ACTIVITY OF RHODOPSIN KINASE
Author(s): INGLESE J; GLICKMAN JF; LORENZ W; CARON MG; LEFKOWITZ RJ
Corporate Source: DUKE UNIV,MED CTR,DEPT MED,BOX 3821/DURHAM//NC/27710; DUKE UNIV,MED CTR,HOWARD HUGHES MED INST/DURHAM//NC/27710; DUKE UNIV,MED CTR,DEPT BIOCHEM/DURHAM//NC/27710; DUKE UNIV,MED CTR,DEPT CELL BIOL/DURHAM//NC/27710; BURROUGHS WELLCOME CO/RES TRIANGLE PK//NC/27709
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1992, V267, N3 (JAN 25), P 1422-1425
Language: ENGLISH Document Type: NOTE
Abstract: The primary structure of bovine rhodopsin kinase (RK), which phosphorylates light-activated rhodopsin (Rho*), terminates with the amino acid sequence Cys558-Val-Leu-Ser561, a motif that has been shown to direct the isoprenylation and alpha-carboxyl methylation of many proteins (e.g. p21Ha-ras). Transient expression of RK in COS-7 cells revealed the presence of two immunoreactive protein species. Consistent with RK being modified by isoprenylation, interconversion of these two species was dependent upon isoprenoid biosynthesis in the cells. Moreover, a serine substitution for Cys558 resulted in a single RK species whose migration on sodium dodecyl sulfate-polyacrylamide gels was identical to that of RK from cells treated with mevinolin, an inhibitor of 3-hydroxy-3-methylglutaryl-coenzyme A reductase and, thus, of isoprenoid biosynthesis. This finding indicates that isoprenylation of RK requires Cys558. The electrophoretic mobility of isoprenylated RK synthesized in COS-7 cells was identical to that of RK from bovine rod outer segments, suggesting that RK is isoprenylated in vivo. RK was determined to be modified by a farnesyl moiety and alpha-carboxyl-methylated. A time course of Rho* phosphorylation revealed that non-processed RK is approximately 4-fold less active than wild-type RK. This is the first demonstration of isoprenylation/alpha-carboxyl methylation of a protein kinase, and suggests that these modifications markedly influence enzymatic activity in vivo.

1/7/12
11320940 Genuine Article#: HA485 Number of References: 28
Title: ASPARAGINE-26, GLUTAMIC ACID-31, VALINE-45, AND TYROSINE-64 OF RAS PROTEINS ARE REQUIRED FOR THEIR ONCOGENICITY
Author(s): NUREKAMAL MSA; SIZELAND A; DABACO G; MARUTA H
Corporate Source: PO ROYAL MELBOURNE HOSP,LUDWIG INST CANC RES,MELBOURNE TUMOR BIOL BRANCH/VICTORIA 3050//AUSTRALIA/; PO ROYAL MELBOURNE HOSP,LUDWIG INST CANC RES,MELBOURNE TUMOR BIOL BRANCH/VICTORIA 3050//AUSTRALIA/
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1992, V267, N3 (JAN 25), P 1415-1418
Language: ENGLISH Document Type: NOTE
Abstract: Ras and Rap1 proteins are related GTP-dependent signal transducers which require Gly-12, the effector domain (residues 32-40), and Ala-59 for stimulation of their GTPase activities by GAP1 and GAP3, respectively. The replacement of Gly-12 by Val or Ala-59 by Thr potentiates the Ras oncogenicity and Rap1A anti-oncogenicity. However, the mutations in the effector domain, in particular the replacement of

Thr-35 by Ala, abolish both Ras oncogenicity and Rap1A anti-oncogenicity, indicating that the effector domain is involved in interactions of these signal transducers with their targets as well as the GAPs. In this paper, we demonstrate that (i) replacement of Tyr-64 of the Ha-Ras protein or Phe-64 of the Rap1A protein by Glu or other non-hydrophobic amino acids reduces their intrinsic GTPase activities and abolishes their stimulation by GAP1 or GAP3, respectively, (ii) replacement of Tyr-64 by Gly and other non-hydrophobic amino acids results in complete loss of the oncogenicity of the v-Ha-Ras protein, indicating that the hydrophobic residue 64, in addition to the known effector domain, is essential for the Ras protein to interact with its target as well as GAP1. In addition we have found that Asn-26, Glu-31, and Val-45 of the v-Ha-Ras protein are required for its oncogenicity. Replacement of the Ras residues at either positions 26, 31, or 45 by the corresponding Rap1A residues abolishes the Ras oncogenicity.

1/7/13
11320939 Genuine Article#: HA485 Number of References: 36
Title: PURIFICATION AND CHARACTERIZATION OF THE CARBOXYL-TERMINAL TRANSACTIVATION DOMAIN OF VMW65 FROM HERPES-SIMPLEX VIRUS TYPE-1
Author(s): DONALDSON L; CAPONE JP
Corporate Source: MCMASTER UNIV,DEPT BIOCHEM/HAMILTON L8N 3Z5/ONTARIO/CANADA/
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1992, V267, N3 (JAN 25), P 1411-1414
Language: ENGLISH Document Type: NOTE
Abstract: A glutathione S-transferase fusion to the COOH-terminal acidic transactivation domain of Vmw65 from herpes simplex virus type 1 was overexpressed in Escherichia coli and isolated by affinity chromatography on glutathione-Sepharose. Following cleavage of the fusion protein with thrombin, the transactivation domain was purified to homogeneity by ion exchange chromatography yielding approximately 0.6 mg of protein/liter of bacterial culture. Equilibrium sedimentation analysis showed the purified polypeptide to be monomeric; however, it displayed aberrant electrophoretic and chromatographic properties. Contrary to secondary structure predictions, circular dichroism spectroscopy demonstrated that this transactivation domain was devoid of significant alpha-helical structure at physiological conditions. The polypeptide, however, became notably more structured under hydrophobic conditions or at low pH, suggesting that it was sensitive to its environment. Near-UV circular dichroism suggested that phenylalanyl and tyrosyl residues were under influence from tertiary structure.

1/7/14
11314826 Genuine Article#: GZ963 Number of References: 32
Title: TRANSLOCATION OF OXYSTEROL BINDING-PROTEIN TO GOLGI-APPARATUS TRIGGERED BY LIGAND-BINDING
Author(s): RIDGWAY ND; DAWSON PA; HO YK; BROWN MS; GOLDSTEIN JL
Corporate Source: UNIV TEXAS,SW MED CTR,DEPT MOLEC GENET/DALLAS//TX/75235
Journal: JOURNAL OF CELL BIOLOGY, 1992, V116, N2 (JAN), P307-319
Language: ENGLISH Document Type: ARTICLE
Abstract: A cDNA encoding a cytoplasmic oxysterol binding protein was expressed at high levels by transfection in animal cells. This protein binds oxysterols such as 25-hydroxycholesterol that regulate sterol metabolism by transcriptional and posttranscriptional effects. In the transfected cells, some of the oxysterol binding protein (OSBP) was distributed diffusely in the cytoplasm, and some was bound to small vesicles near the nucleus, as revealed by indirect immunofluorescence.

Upon addition of 25-hydroxycholesterol, most of the OSBP became concentrated in large perinuclear structures that stained with lentil lectin, a protein that stains the Golgi apparatus. The structures that contained OSBP were disrupted by brefeldin A, confirming their identification as Golgi. A mutant OSBP lacking the COOH-terminal oxysterol binding domain localized to the Golgi spontaneously, suggesting that this domain normally occludes the domain that binds to the Golgi and that sterols relieve this occlusion. The previously noted potential leucine zipper sequence in OSBP was not required for Golgi localization, nor was it essential for homodimer formation. We conclude that OSBP is triggered to bind extrinsically to Golgi membranes when it binds oxysterols and speculate that this translocation may play a role in the transport, metabolism, or regulatory actions of oxysterols.

1/7/15
11312451 Genuine Article#: GZ964 Number of References: 32
Title: DIRECT INTERACTION BETWEEN 2 ESCHERICHIA-COLI TRANSCRIPTION ANTITERMINATION FACTORS, NUSB AND RIBOSOMAL-PROTEIN S10
Author(s): MASON SW; LI J; GREENBLATT J
Corporate Source: 112 COLL ST/TORONTO M5G 1L6/ONTARIO/CANADA/; UNIV TORONTO,DEPT MOLEC & MED GENET/TORONTO M5S1A1/ONTARIO/CANADA/; UNIV TORONTO,BANTING & BEST DEPT MED RES/TORONTO M5S 1A1/ONTARIO/CANADA/
Journal: JOURNAL OF MOLECULAR BIOLOGY, 1992, V223, N1 (JAN 5), P55-66
Language: ENGLISH Document Type: ARTICLE

1/7/16
11312357 Genuine Article#: GZ696 Number of References: 39
Title: INTERKINASE DOMAIN OF KIT CONTAINS THE BINDING-SITE FOR PHOSPHATIDYLINOSITOL 3' KINASE
Author(s): LEV S; GIVOL D; YARDEN Y
Corporate Source: WEIZMANN INST SCI,DEPT CHEM IMMUNOL/IL-76100 REHOVOT//ISRAEL/
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1992, V89, N2 (JAN 15), P678-682
Language: ENGLISH Document Type: ARTICLE
Abstract: Our previous analysis of the signal transduction pathway used by the c-kit-encoded receptor for the stem cell factor (SCF) indicated efficient coupling to the type I phosphatidylinositol 3' kinase (PI3K). In an attempt to localize the receptor's site of interaction with PI3K, we separately deleted either the noncatalytic 68-amino-acid-long interkinase domain or the carboxyl-terminal portion distal to the catalytic sequences. Loss of ligand-induced association of PI3K with the former deletion mutant and retention of the PI3K association by the carboxyl-terminally deleted receptor implied interactions of PI3K with the kinase insert. This was further supported by partial inhibition of the association by an anti-peptide antibody directed against the kinase insert and lack of effect of an antibody directed to the carboxyl tail of the SCF receptor. A bacterially expressed kinase insert domain was used as a fusion protein to directly test its presumed function as a PI3K association site. This protein bound PI3K from cell lysate as demonstrated by PI3K activity and by an associated phosphoprotein of 85 kDa. The association was dependent on phosphorylation of the tyrosine residues on the expressed kinase insert. On the basis of these observations, we conclude that the kinase insert domain of the SCF receptor selectively interacts with the p85 regulatory subunit of PI3K and that this association requires phosphorylation of tyrosine residues in the kinase insert region, with apparently no involvement of the bulk cytoplasmic structure or tyrosine kinase function of the receptor.

1/7/17
11312333 Genuine Article#: GZ696 Number of References: 30
Title: CHARACTERIZATION OF A PROTOTYPE STRAIN OF HEPATITIS-E VIRUS
Author(s): TSAREV SA; EMERSON SU; REYES GR; TSAREVA TS; LEGTERS LJ; MALIK IA; IQBAL M; PURCELL RH
Corporate Source: NIAID,INFECT DIS LAB,HEPATITIS VIRUSES SECT,BLDG 7,ROOM 200,9000 ROCKVILLE PIKE/BETHESDA//MD/20892; MM SHEMYAKIN BIOORGAN CHEM INST/MOSCOW 117871//USSR/; ARMY MED COLL,PAKISTAN US LAB SEROEPIDEMIOL/RALWALPIND//PAKISTAN/; GENELABS INC,DEPT MOLEC VIROL/REDWOOD CITY//CA/94063; UNIFORMED SERV UNIV HLTH SCI,DEPT PREVENT MED &BIOMETR/BETHESDA//MD/20814
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1992, V89, N2 (JAN 15), P559-563
Language: ENGLISH Document Type: ARTICLE
Abstract: A strain of hepatitis E virus (SAR-55) implicated in an epidemic of enterically transmitted non-A, non-B hepatitis, now called hepatitis E, was characterized extensively. Six cynomolgus monkeys (Macaca fascicularis) were infected with a strain of hepatitis E virus from Pakistan. Reverse transcription-polymerase chain reaction was used to determine the pattern of virus shedding in feces, bile, and serum relative to hepatitis and induction of specific antibodies. Virtually the entire genome of SAR-55 (7195 nucleotides) was sequenced. Comparison of the sequence of SAR-55 with that of a Burmese strain revealed a high level of homology except for one region encoding 100 amino acids of a putative nonstructural polyprotein. Identification of this region as hypervariable was obtained by partial sequencing of a third isolate of hepatitis E virus from Kirgizia.

1/7/18
11310121 Genuine Article#: GY965 Number of References: 51
Title: CHARACTERIZATION OF HUMAN CYTOMEGALOVIRUS-UL84 EARLY GENE AND IDENTIFICATION OF ITS PUTATIVE PROTEIN PRODUCT
Author(s): HE YS; XU L; HUANG ES
Corporate Source: UNIV N CAROLINA,LINEBERGER COMPREHENS CANC CTR/CHAPEL HILL//NC/27599; UNIV N CAROLINA,LINEBERGER COMPREHENS CANC CTR/CHAPEL HILL//NC/27599; UNIV N CAROLINA,DEPT MED/CHAPEL HILL//NC/27599; UNIV N CAROLINA,DEPT MICROBIOL & IMMUNOL/CHAPELHILL//NC/27599; UNIV N CAROLINA,GENET CURRICULUM/CHAPEL HILL//NC/27599
Journal: JOURNAL OF VIROLOGY, 1992, V66, N2 (FEB), P1098-1108
Language: ENGLISH Document Type: ARTICLE
Abstract: The DNA sequence and transcription pattern of human cytomegalovirus early gene UL84 were analyzed. This gene was mapped within a 2.6-kb PstI fragment located between 0.534 and 0.545 map unit of the large unique segment of the human cytomegalovirus genome, which is adjacent to the pp65 and pp71 genes. A 2.0-kb mRNA was transcribed from this region in the same leftward direction as the mRNAs of the pp65 and pp71 genes. The message was first detected at 2.5 h postinfection and reached a maximal level between 72 and 96 h postinfection. The nucleotide sequences of the 2.6-kb PstI genomic DNA fragment and the cDNA derived from this region were determined. The resulting data revealed a polyadenylation signal (AATAAA) located 14 nucleotides upstream from the poly(A) tail of the cDNA and a 1,761-bp open reading frame capable of encoding a 65-kDa polypeptide. A potential leucine zipper was found in the N-terminal half of the peptide molecule between amino acids 114 and 135. In addition, a different periodic leucine repeat with leucine at every eighth position was found between amino acids 325 and 373. The transcriptional initiation site of this early gene was determined by primer extension

analysis. A putative TATA box (TATTTAA) located 24 bp upstream of the cap site and several inverted repeats were found in the region further upstream of the TATA box. To test whether the open reading frame of this cDNA encodes a virus-specific protein, the cDNA was overexpressed in Escherichia coli as a fusion protein used to generate antibodies in rabbits. A protein with a molecular size of 65 kDa was detected in the infected-cell extracts harvested at 6 to 72 h postinfection, but not in purified virions, using immunoblot analysis. Both nuclear and cytoplasmic fluorescences were found at late stages of virus infection. From the results obtained, we postulate that UL84 may be a stable, virus-specific, nonstructural protein capable of forming a homo- or heterodimeric molecule.

1/7/19
11301743 Genuine Article#: GY554 Number of References: 23
Title: PURIFICATION OF A MULTIPROTEIN COMPLEX CONTAINING CENTROSOMAL PROTEINS FROM THE DROSOPHILA EMBRYO BY CHROMATOGRAPHY WITH LOW-AFFINITY POLYCLONAL ANTIBODIES
Author(s): KELLOGG DR; ALBERTS BM
Corporate Source: UNIV CALIF SAN FRANCISCO,DEPT PHYS/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT BIOCHEM & BIOPHYS/SAN FRANCISCO//CA/94143
Journal: MOLECULAR BIOLOGY OF THE CELL, 1992, V3, N1 (JAN), P1-11
Language: ENGLISH Document Type: ARTICLE
Abstract: A 190-kDa centrosomal protein interacts with microtubules when Drosophila embryo extracts are passed over microtubule-affinity columns. We have obtained a partial cDNA clone that encodes this protein. Using a fusion protein produced from the clone, we have developed a novel immunoaffinity chromatography procedure that allows both the 190-kDa protein and a complex of proteins that associates with it to be isolated in a single step. For this procedure, the fusion protein is used as an antigen to prepare rabbit polyclonal antibodies, and those antibodies that recognize the 190-kDa protein with low affinity are selectively purified on a column containing immobilized antigen. These low-affinity antibodies are then used to construct an immunoaffinity column. When Drosophila embryo extracts are passed over this column, the 190-kDa protein is quantitatively retained and can be eluted in nearly pure form under nondenaturing conditions with 1.5 M MgCl2, pH 7.6. The immunoaffinity column is washed with 1.0 M KCl just before the elution with 1.5 M MgCl2. This wash elutes 10 major proteins, as well as a number of minor ones. We present evidence that these KCl-eluted proteins represent additional centrosomal components that interact with the 190-kDa protein to form a multiprotein complex within the cell.

1/7/20
11301640 Genuine Article#: GY960 Number of References: 16
Title: MAXADILAN - CLONING AND FUNCTIONAL EXPRESSION OF THE GENE ENCODING THIS POTENT VASODILATOR PEPTIDE
Author(s): LERNER EA; SHOEMAKER CB
Corporate Source: CUTANEOUS BIOL RES CTR,MGH E,BLDG 149,13TH ST/BOSTON//MA/02129; HARVARD UNIV,BRIGHAM & WOMENS HOSP,SCH MED,DEPTDERMATOL,DIV DERMATOL/BOSTON//MA/02115; HARVARD UNIV,SCH PUBL HLTH,DEPT TROP PUBL HLTH/BOSTON//MA/02115
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1992, V267, N2 (JAN 15), P 1062-1066
Language: ENGLISH Document Type: ARTICLE
Abstract: Maxadilan is a potent vasodilator peptide released into the skin

when the sand fly Lutzomyia longipalpis, an important vector of leishmania, probes for a blood meal. As several lines of evidence suggest that this peptide may play a critical role in the enhancement of leishmania infectivity attributed to sand fly saliva, the peptide has been proposed as a candidate antigen for a leishmanial vaccine. Although maxadilan is the most potent vasodilator peptide known and shares several properties with calcitonin gene-related peptide (CGRP), studies of its structure, physiological effects, and biological roles have been limited by the miniscule quantities available. Here we report the isolation of cDNA and genomic DNA clones that encode maxadilan. The predicted translation product shows no significant homology with any previously isolated proteins. The coding DNA has been expressed in Escherichia coli and the purified recombinant peptide is biologically active with a specific activity comparable to the natural peptide. Recombinant maxadilan will be useful in studies of vascular biology and could lead to novel therapeutic and prophylactic agents.

1/7/21
11283073 Genuine Article#: GW998 Number of References: 32
Title: THE IDENTIFICATION AND CLONING OF THE MURINE GENES ENCODING THE LIVER SPECIFIC F-ALLOANTIGENS
Author(s): TEUBER SS; COPPEL RL; ANSARI AA; LEUNG PSC; NEVE R; MACKAY IR; GERSHWIN ME
Corporate Source: UNIV CALIF DAVIS,SCH MED,DIV RHEUMATOL ALLERGY,TB 192/DAVIS//CA/95616; UNIV CALIF DAVIS,DIV CLIN IMMUNOL/DAVIS//CA/95616; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; EMORY UNIV,SCH MED,DEPT PATHOL/ATLANTA//GA/30322; UNIV CALIF IRVINE,DEPT PSYCHOBIOL/IRVINE//CA/92717; MONASH UNIV/CLAYTON/VIC 3168/AUSTRALIA/
Journal: JOURNAL OF AUTOIMMUNITY, 1991, V4, N6 (DEC), P857-870
Language: ENGLISH Document Type: ARTICLE

1/7/22
11276892 Genuine Article#: GX791 Number of References: 30
Title: INTERACTION BETWEEN HUMAN CYCLIN-A AND ADENOVIRUS E1A-ASSOCIATED P107 PROTEIN
Author(s): FAHA B; EWEN ME; TSAI LH; LIVINGSTON DM; HARLOW E
Corporate Source: MASSACHUSETTS GEN HOSP,CTR CANC/BOSTON//MA/02129; HARVARD UNIV,SCH MED,DANA FARBER CANC INST/BOSTON//MA/02115
Journal: SCIENCE, 1992, V255, N5040 (JAN 3), P87-90
Language: ENGLISH Document Type: ARTICLE
Abstract: The products of the adenovirus early region IA (EIA) gene are potent oncoproteins when tested in standard transformation and immortalization assays. Many of the changes induced by EIA may be due to its interaction with cellular proteins. Four of these cellular proteins are the retinoblastoma protein (pRB), p107, cyclin A, and p33cdk2. The pRB and p107 proteins are structurally related and have several characteristics in common, including that they both bind to the SV40 large T oncoprotein as well as to E1A. Cyclin A and p33cdk2 are thought to function in the control of the cell cycle. They bind to one another, forming a kinase that closely resembles the cell cycle-regulating complexes containing p34cdc2. Cyclin A is now shown to bind to p107 in the absence of E1A. The association of p107 with cyclin A suggests a direct link between cell cycle control and the function of p107.

1/7/23
11275473 Genuine Article#: GW053 Number of References: 17

Title: C-TERMINAL SEQUENCES CAN INHIBIT THE INSERTION OF MEMBRANE-PROTEINS INTO THE ENDOPLASMIC-RETICULUM OF SACCHAROMYCES-CEREVISIAE
Author(s): GREEN N; WALTER P
Corporate Source: VANDERBILT UNIV,MED CTR,SCH MED,DEPT MICROBIOL & IMMUNOL/NASHVILLE//TN/37232; UNIV CALIF SAN FRANCISCO,SCH MED,DEPT BIOCHEM &BIOPHYS/SAN FRANCISCO//CA/94143
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1992, V12, N1 (JAN), P276-282
Language: ENGLISH Document Type: ARTICLE
Abstract: We have constructed three gene fusions that encode portions of a membrane protein, arginine permease, fused to a reporter domain, the cytoplasmic enzyme histidinol dehydrogenase (HD), located at the C-terminal end. These fusion proteins contain at least one of the internal signal sequences of arginine permease. When the fusion proteins were expressed in Saccharomyces cerevisiae and inserted into the endoplasmic reticulum (ER), two of the fusion proteins placed HD on the luminal side of the ER membrane, but only when a piece of DNA encoding a spacer protein segment was inserted into the fusion joint. The third fusion protein, with or without the spacer included, placed HD on the cytoplasmic side of the membrane. These results suggest that (i) sequences C-terminal to the internal signal sequence can inhibit membrane insertion and (ii) HD requires a preceding spacer segment to be translocated across the ER membrane.

1/7/24
11275447 Genuine Article#: GW053 Number of References: 48
Title: THE GENERAL TRANSCRIPTION FACTOR RAP30 BINDS TO RNA POLYMERASE-II AND PREVENTS IT FROM BINDING NONSPECIFICALLY TO DNA
Author(s): KILLEEN MT; GREENBLATT JF
Corporate Source: UNIV TORONTO,DEPT MOLEC & MED GENET/TORONTO M5G1L6/ONTARIO/CANADA/; UNIV TORONTO,DEPT MOLEC & MED GENET/TORONTO M5G1L6/ONTARIO/CANADA/; UNIV TORONTO,CHARLES H BEST INST,DEPT BANTING &BEST/TORONTO M5G 1L6/ONTARIO/CANADA/
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1992, V12, N1 (JAN), P30-37
Language: ENGLISH Document Type: ARTICLE
Abstract: RAP30/74 is a human general transcription factor that binds to RNA polymerase II and is required for initiation of transcription in vitro regardless of whether the promoter has a recognizable TATA box (Z. F. Burton, M. Killeen, M. Sopta, L. G. Ortolan, and J. F. Greenblatt, Mol. Cell. Biol. 8:1602-1613, 1988). Part of the amino acid sequence of RAP30, the small subunit of RAP30/74, has limited homology with part of Escherichia coli sigma-70 (M. Sopta, Z. F. Burton, and J. Greenblatt, Nature (London) 341:410-414, 1989). To determine which sigmalike activities of RAP30/74 could be attributed to RAP30, we purified human RAP30 and a RAP30-glutathione-S-transferase fusion protein that had been produced in E. coli. Bacterially produced RAP30 bound to RNA polymerase II in the absence of RAP74. Both partially purified natural RAP30/74 and recombinant RAP30 prevented RNA polymerase II from binding nonspecifically to DNA. In addition, nonspecific transcription by RNA polymerase II was greatly inhibited by RAP30-glutathione-S-transferase. DNA-bound RNA polymerase II could be removed from DNA by partially purified RAP30/74 but not by bacterially expressed RAP30. Thus, the ability of RAP30/74 to recruit RNA polymerase II to a promoter-bound preinitiation complex may be an indirect consequence of its ability to suppress nonspecific binding of RNA polymerase II to DNA.

1/7/25
11274608 Genuine Article#: GX544 Number of References: 45

Title: DNA-BINDING PROPERTIES OF THE HMG DOMAIN OF THE LYMPHOID-SPECIFIC TRANSCRIPTIONAL REGULATOR LEF-1
Author(s): GIESE K; AMSTERDAM A; GROSSCHEDL R
Corporate Source: UNIV CALIF SAN FRANCISCO,DEPT MICROBIOL,HOWARD HUGHES MED INST/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT BIOCHEM/SAN FRANCISCO//CA/94143
Journal: GENES & DEVELOPMENT, 1991, V5, N12B (DEC), P2567-2578
Language: ENGLISH Document Type: ARTICLE
Abstract: Lymphoid enhancer-binding factor 1 (LEF-1) is a pre-B and T lymphocyte-specific nuclear protein that participates in the regulation of the T-cell antigen receptor (TCR) a enhancer by binding to the nucleotide sequence 5′-CCTTTGAA. LEF-1 protein shares with the nonhistone high mobility group protein 1 (HMG-1) and several transcriptional regulators a single region of amino acid homology, termed the HMG box, which has been implicated in DNA binding. Here, we report the biochemical analysis of the interaction of this novel structural motif with DNA. First, amino- or carboxy-terminal truncations of the LEF-1 polypeptide delineated the HMG box as the DNA-binding domain. We purified to homogeneity a LEF-HMG domain peptide expressed in Escherichia coli and determined the equilibrium constant for specific binding to DNA as 1 x 10(-9) m. Second, cotranslation of wild-type and various truncated LEF-1 polypeptides did not generate any DNA-binding heterodimers, suggesting that LEF-1 can bind DNA as a monomer. Third, methylation interference analysis indicated that the HMG domain specifically contacts DNA on one side of the double helix. Finally, changes of amino acids that are conserved among various members of the family of HMG-box proteins decreased the affinity of DNA binding by one to three orders of magnitude. Together, these data define the characteristics of specific DNA-binding by the HMG domain of LEF-1.

1/7/26
11273938 Genuine Article#: GX164 Number of References: 85
Title: SPECIFIC ACTIVATION OF CDC25 TYROSINE PHOSPHATASES BY B-TYPE CYCLINS - EVIDENCE FOR MULTIPLE ROLES OF MITOTIC CYCLINS
Author(s): GALAKTIONOV K; BEACH D
Corporate Source: COLD SPRING HARBOR LAB,HOWARD HUGHES MED INST/COLD SPRING HARBOR//NY/11724
Journal: CELL, 1991, V67, N6 (DEC 20), P1181-1194
Language: ENGLISH Document Type: ARTICLE
Abstract: Two previously unidentified human cdc25 genes have been isolated, cdc25A and cdc25B. Both genes rescue a cdc25ts mutant of fission yeast. Microinjection of anti-cdc25A antibodies into HeLa cells causes their arrest in mitosis. cdc25A and cdc25B display endogenous tyrosine phosphatase activity that is stimulated several-fold, in the absence of cdc2, by stoichiometric addition of either cyclin B1 or B2 but not A or D1. Association between cdc25A and cyclin B1/cdc2 was detected in the HeLa cells. These findings indicate that B-type cyclins are multifunctional proteins that not only act as M phase regulatory subunits of the cdc2 protein kinase, but also activate the cdc25 tyrosine phosphatase, of which cdc2 is the physiological substrate. A region of amino acid similarity between cyclins and tyrosine PTPases has been detected. This region is absent in cdc25 phosphatases. The motif may represent an activating domain that has to be provided to cdc25 by intermolecular interaction with cyclin B.

1/7/27
11273893 Genuine Article#: GW762 Number of References: 13

Title: IMMUNODIAGNOSIS OF FELINE IMMUNODEFICIENCY VIRUS-INFECTION USING RECOMBINANT VIRAL P17 AND P24
Author(s): REID G; RIGBY MA; MCDONALD M; HOSIE MJ; NEIL JC; JARRETT O
Corporate Source: UNIV GLASGOW,DEPT VET PATHOL,MRC,RETROVIRUS RESLAB/GLASGOW G61 1QH//SCOTLAND/
Journal: AIDS, 1991, V5, N12 (DEC), P1477-1483
Language: ENGLISH Document Type: ARTICLE
Abstract: The coding sequences of p17 and p24 of the Glasgow-8 strain of feline immunodeficiency virus (FIV) were amplified using the polymerase chain reaction and cloned into plasmid vectors. The predicted amino-acid sequences of FIV/Glasgow-8 p17 and p24 were compared with those of the Petaluma and PPR isolates of FIV. As seen with other retroviruses, these gag gene products are highly conserved, indicating that the protein products would be suitable antigens to detect anti-FIV antibodies in an immunoassay. Both p17 and p24 were stably expressed in Escherichia coli as fusion proteins with glutathione S transferase. A pure preparation of each fusion protein was obtained from induced bacterial lysates by affinity chromatography using glutathione-agarose beads. These recombinant proteins were used in an enzyme-linked immunosorbent assay to detect antibodies directed against FIV p17 and p24 in cat sera. This assay allows the identification of seropositive cats following infection with FIV and has greater sensitivity and specificity than a currently available immunodiagnostic test.

1/7/28
11267139 Genuine Article#: GW362 Number of References: 44
Title: IDENTIFICATION AND CHARACTERIZATION OF AN ONCHOCERCA-VOLVULUS CDNA CLONE ENCODING A MICROFILARIAL SURFACE-ASSOCIATED ANTIGEN
Author(s): LUSTIGMAN S; BROTMAN B; JOHNSON EH; SMITH AB; HUIMA T; PRINCE AM
Corporate Source: NEW YORK BLOOD CTR,LINDSLEY F KIMBALL RES INST,VIROL & PARASITOL LAB,310 E 67TH ST/NEW YORK//NY/10021; LIBERIAN INST BIOMED RES,VILAB 2/ROBERTSFIELD//LIBERIA/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1992, V50, N1 (JAN), P 79-94
Language: ENGLISH Document Type: ARTICLE
Abstract: The identification and characterization of a recombinant cDNA clone (OV103) expressing a microfilarial surface-associated antigen of Onchocerca volvulus is described. OV103 was identified and isolated from a lambda-gt11 cDNA expression library derived from adult O. volvulus mRNA using a chimpanzee antiserum, taken 2 years after infection with third-stage larvae of O. volvulus. The cDNA clone encodes a 12.5-kDa protein that corresponds to a 15-kDa parasite protein present in microfilariae and adult female worms. The antigen encoded by this clone is located in the basal layer of the cuticle and the hypodermis of the female adult worm, and on the surface of microfilariae. OV103 fusion polypeptide is recognized only by some sera from onchocerciasis infected subjects (57%), but more significantly (89%) by sera from individuals that have low levels of patent infection. In addition, the antibody response to this protein developed before appearance of microfilariae in the skin of chimpanzees that had developed non-patent or low level patent infections, while the antibody response in chimpanzees with high levels of microfilariae appeared later at the time of appearance of microfilariae. Preliminary experiments indicated that affinity purified antibodies directed against OV103 fusion polypeptide mediated killing of nodular microfilariae in vitro in the presence of normal peripheral blood granulocytes.

1/7/29
11265798 Genuine Article#: GW031 Number of References: 33
Title: SEROLOGIC REACTIVITIES OF THE 23-KDA INTEGRAL MEMBRANE-PROTEINS OF SCHISTOSOMES
Author(s): WRIGHT MD; MELDER AM; DAVERN KM; MITCHELL GF
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF IMMUNOLOGY, 1991, V147, N12 (DEC 15), P4338-4342
Language: ENGLISH Document Type: ARTICLE
Abstract: The 23-kDa integral membrane proteins of Schistosoma mansoni and Schistosoma japonicum (Sm23 and Sj23) are Ag of some interest in terms of both antiparasite vaccination and immunodiagnosis. We have raised an antiserum against a recombinant fusion protein expressing the extracellular hydrophyllic domain of Sm23 (Sm23HD-pGEX) and used this serum, as well as other antibody reagents reacting with Sm/Sj23, in immunochemical analyses. The immunogenicity and antigenicity of Sm23HD-pGEX, and the surprising lack of cross-reactivity between Sm23 and Sj23 support the hypothesis that Sm/Sj23 are host-like molecules with a very limited number of B cell epitopes that are likely to reside in the extracellular hydrophyllic domain. We also present evidence that, unlike the highly immunogenic Sj23, Sm23 is not immunogenic in chronically infected mice. Moreover, we confirm a surface location for Sj23 in adult worms, in S. japonicum.

1/7/30
11262868 Genuine Article#: GV806 Number of References: 11
Title: IMMUNOLOGICAL IDENTIFICATION AND SEQUENCE CHARACTERIZATION OF A PEPTIDE DERIVED FROM THE PROCESSING OF NEUROENDOCRINE PROTEIN-7B2
Author(s): PAQUET L; RONDEAU N; SEIDAH NG; LAZURE C; CHRETIEN M; MBIKAY M
Corporate Source: UNIV MONTREAL,INST RECH CLIN MONTREAL,110 AVE PINS OUEST/MONTREAL H2W 1R7/QUEBEC/CANADA/; UNIV MONTREAL,INST RECH CLIN MONTREAL,110 AVE PINS OUEST/MONTREAL H2W 1R7/QUEBEC/CANADA/
Journal: FEBS LETTERS, 1991, V294, N1-2 (DEC 2), P23-26
Language: ENGLISH Document Type: ARTICLE
Abstract: A newly raised antiserum against the C-terminal region of neuroendocrine protein 7B2 was used to purify a novel peptide from the culture media of the mouse corticotroph cell line AtT-20. Based on partial sequencing, this peptide, which we call Cter-7B2, begins at Ser156 and appears to result from the cleavage of pro7B2 after a five-basic-residue sequence. Thus, 7B2 processing may contribute to the diversity of peptides found in neuronal and endocrine cells.

1/7/31
11256988 Genuine Article#: GV260 Number of References: 47
Title: INVITRO DNA-BINDING ACTIVITY OF FOS/JUN AND BZLF1 BUT NOT C/EBP IS AFFECTED BY REDOX CHANGES
Author(s): BANNISTER AJ; COOK A; KOUZARIDES T
Corporate Source: UNIV CAMBRIDGE,WELLCOME INST,CTR CANC RES,TENNIS COURT RD/CAMBRIDGE CB2 1QR//ENGLAND/; UNIV CAMBRIDGE,ADDENBROOKES HOSP,DEPT PATHOL,DIV VIROL/CAMBRIDGE CB2 2QQ//ENGLAND/
Journal: ONCOGENE, 1991, V6, N7, P1243-1250
Language: ENGLISH Document Type: ARTICLE
Abstract: The leucine zipper family of proteins have a DNA binding domain composed of a leucine zipper dimerisation interface and a basic DNA binding structure. We show here that redox changes affect the in vitro DNA binding ability of a select subset of leucine zipper proteins. The bacterially expressed DNA binding domains of Fos/Jun and BZLF1 are unable to bind DNA under non-reducing conditions whereas binding of the

C/EBP DNA binding domain is unaffected. Sensitivity to redox state is due to the presence of a conserved cysteine residue in the basic DNA binding motif of Fos, Jun and BZLF1 but not C/EBP. Under non-reducing conditions an intermolecular disulphide bridge is formed between the cysteine residues of each basic motif within a dimer, which prevents DNA binding. We show that oxidation of these C residues can be achieved enzymatically, using glutathione peroxidase, and that DNA binding protects them from oxidation. These data raise the possibility that intracellular changes in the redox state may differentially regulate the activity of leucine zipper family members. In addition the loss of DNA binding activity under non-reducing conditions has implications for the purification methods used to isolate proteins of the leucine zipper family for structural analysis.

1/7/32
11256676 Genuine Article#: GW316 Number of References: 26
Title: MITOTIC PHOSPHORYLATION OF THE OCT-1 HOMEODOMAIN AND REGULATION OF OCT-1 DNA-BINDING ACTIVITY
Author(s): SEGIL N; ROBERTS SB; HEINTZ N
Corporate Source: ROCKEFELLER UNIV,HOWARD HUGHES MED INST,MOLEC BIOL LAB/NEW YORK//NY/10021
Journal: SCIENCE, 1991, V254, N5039, P1814-1816
Language: ENGLISH Document Type: ARTICLE
Abstract: Oct-1 is a transcription factor involved in the cell cycle regulation of histone H2B gene transcription and in the transcription of other cellular housekeeping genes. Oct-1 is hyperphosphorylated as cells enter mitosis, and mitosis-specific phosphorylation is reversed as cells exit mitosis. A mitosis-specific phosphorylation site in the homeodomain of Oct-1 was phosphorylated in vitro by protein kinase A. Phosphorylation of this site correlated with inhibition of Oct-1 DNA binding activity in vivo and in vitro. The inhibition of Oct-1 DNA binding during mitosis suggests a mechanism by which the general inhibition of transcription during mitosis might occur.

1/7/33
11255790 Genuine Article#: GV877 Number of References: 28
Title: CLONING AND CHARACTERIZATION OF A RECEPTOR-CLASS PHOSPHOTYROSINE PHOSPHATASE GENE EXPRESSED ON CENTRAL-NERVOUS-SYSTEM AXONS IN DROSOPHILA-MELANOGASTER
Author(s): HARIHARAN IK; CHUANG PT; RUBIN GM
Corporate Source: UNIV CALIF BERKELEY,HOWARD HUGHES MED INST,DEPTMOLEC & CELL BIOL/BERKELEY//CA/94720
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N24, P11266-11270
Language: ENGLISH Document Type: ARTICLE
Abstract: We have cloned and characterized cDNAs coding for a receptor-class phosphotyrosine phosphatase gene from Drosophila melanogaster. The gene maps to the polytene chromosome bands 99A7-8. The cDNA clones code for a polypeptide of 1301 amino acids with a predicted molecular mass of 145 kDa. The extracellular domain includes two fibronectin-type III-like domains. The cytoplasmic region contains two tandemly repeated phosphotyrosine phosphatase-like domains. Residues shown crucial for catalytic activity are absent in the second domain. This Drosophila receptor-class phosphotyrosine phosphatase polypeptide is expressed on axons of the embryonic central nervous system.

1/7/34

11252080 Genuine Article#: GU994 Number of References: 20
Title: LOCALIZATION OF A SURFACE DOMAIN OF THE CAPSID PROTEIN OF BARLEY YELLOW DWARF VIRUS
Author(s): RIZZO TM; GRAY SM
Corporate Source: CORNELL UNIV,USDA ARS/ITHACA//NY/14853; CORNELL UNIV,USDA ARS/ITHACA//NY/14853; CORNELL UNIV,DEPT PLANT PATHOL/ITHACA//NY/14853
Journal: VIROLOGY, 1992, V186, N1, P300-302
Language: ENGLISH Document Type: NOTE

1/7/35
11251414 Genuine Article#: GU971 Number of References: 44
Title: REGULATION OF HUMAN-IMMUNODEFICIENCY-VIRUS ENHANCER FUNCTION BY PRDII-BF1 AND C-REL GENE-PRODUCTS
Author(s): MUCHARDT C; SEELER JS; NIRULA A; SHURLAND DL; GAYNOR RB
Corporate Source: UNIV TEXAS,HLTH SCI CTR,SW MED SCH,DEPT MED,DIVMOLEC VIROL/DALLAS//TX/75235; UNIV TEXAS,HLTH SCI CTR,SW MED SCH,DEPT MED,DIVMOLEC VIROL/DALLAS//TX/75235; UNIV TEXAS,HLTH SCI CTR,SW MED SCH,DEPT MICROBIOL/DALLAS//TX/75235
Journal: JOURNAL OF VIROLOGY, 1992, V66, N1, P244-250
Language: ENGLISH Document Type: ARTICLE
Abstract: The human immunodeficiency virus (HIV) enhancer element is important in the regulation of HIV gene expression. A number of cellular proteins have been demonstrated to bind to the NF-kappa-B motifs in this element. The genes encoding several of these proteins, including members of the rel family and PRDII-BF1, have been cloned. We characterized the binding of proteins encoded by the human c-rel and PRDII-BF1 genes to HIV NF-kappa-B motifs and related enhancer elements. Both the human c-rel protein and two proteins derived from the PRDII-BF1 gene by alternative splicing bound specifically to the HIV NF-kappa-B motif and related enhancer elements found in the immunoglobulin kappa, class I major histocompatibility complex, and interleukin-2 receptor genes. To determine the role of these factors in regulating HIV gene expression, we fused the cDNAs encoding either of the two proteins derived by alternative splicing of the PRDII-BF1 gene or the c-rel gene to the DNA binding region of the yeast transcription factor GAL4. GAL4 binding sites were inserted in place of the native HIV enhancer sequences in an HIV long terminal repeat chloramphenicol acetyltransferase construct. Cotransfection of these constructs revealed that c-rel was a strong activator of basal HIV gene expression but did not result in synergistic effects in the presence of tat. PRDII-BF1-derived cDNAs did not result in stimulation of either basal or tat-induced activated gene expression. These results indicate that multiple enhancer binding proteins may potentially regulate HIV in both a positive and negative manner.

1/7/36
11247877 Genuine Article#: GU254 Number of References: 30
Title: COMPLETE PRIMARY STRUCTURE OF PORCINE TENASCIN - DETECTION OF TENASCIN TRANSCRIPTS IN ADULT SUBMAXILLARY-GLANDS
Author(s): NISHI T; WEINSTEIN J; GILLESPIE WM; PAULSON JC
Corporate Source: CYTEL CORP,3525 JOHN HOPKINS CT/SAN DIEGO//CA/92121; CYTEL CORP,3525 JOHN HOPKINS CT/SAN DIEGO//CA/92121; UNIV CALIF LOS ANGELES,SCH MED,DEPT BIOL CHEM/LOS ANGELES//CA/90024; KYOWA HAKKO KOGYO CO LTD,TOKYO RES LABS/TOKYO//JAPAN/; AMGEN INC,DEPT CELLULAR BIOL/THOUSAND OAKS//CA/00000
Journal: EUROPEAN JOURNAL OF BIOCHEMISTRY, 1991, V202, N2, P643-648
Language: ENGLISH Document Type: ARTICLE
Abstract: Tenascin is an extracellular matrix protein that is postulated to

modulate tissue differentiation and cell migration during development. cDNA clones for tenascin were isolated from a CDNA library of adult porcine submaxillary glands. Three forms of tenascin clones were observed which varied with the number (8-10) of fibronectin type III (FN-III) domains. A major form consists of the N-terminal domain involved in the hexamer formation of tenascin subunits, 14 epidermal-growth-factor-like domains, nine FN-III domains, and the fibrinogen-like domain. A minor form with ten FN-III domains has never been described. Another striking feature is the lack of an RGD sequence that has been implicated to be crucial for cell adhesion, whereas RGD is present in both chicken and human tenascin sequences. In the adult, tenascin is expressed in very restricted tissues such as brain and chicken gizzard. A survey of tenascin transcripts in various adult rat normal tissues, including brain, revealed that the transcripts were detected only in submaxillary glands where tenascin expression has never been reported.

1/7/37
11244928 Genuine Article#: GU846 Number of References: 67
Title: HUMAN SRF-RELATED PROTEINS - DNA-BINDING PROPERTIES AND POTENTIAL REGULATORY TARGETS
Author(s): POLLOCK R; TREISMAN R
Corporate Source: IMPERIAL CANC RES FUND,TRANSCRIPT LAB/LONDON WC2A 3PX//ENGLAND/
Journal: GENES & DEVELOPMENT, 1991, V5, N12A, P2327-2341
Language: ENGLISH Document Type: ARTICLE
Abstract: Serum response factor (SRF) is a transcription factor that binds the sequence CC(A/T)6GG found in a number of growth factor-inducible and muscle-specific promoters. We describe the isolation and characterization of cDNA clones encoding a family of three human SRF-related DNA-binding proteins. Each of these RSRF (related to SRF) proteins contains an 86-amino-acid amino-terminal region related to the SRF DNA-binding domain: In RSRFC4 and RSRFC9, this region is identical, whereas that present in RSRFR2 differs by seven conservative amino acid substitutions. The DNA-binding specificity of the RSRF proteins, which recognize the consensus sequence CTA(A/T)4TAG, is distinct from that of SRF. The entire RSRF common region is required for DNA binding, and the differential sequence specificity of the RSRFs and SRF is the result of differences in the basic amino-terminal part of this domain. The RSRF proteins bind DNA as dimers and can dimerize with one another but not with SRF. Although the RSRF mRNAs are expressed in many cell types, RSRFR2 mRNA is expressed at elevated levels in several B-cell lines. Consistent with this, extracts from many cell types form CTA(A/T)4TAG-binding complexes that contain RSRF proteins, and oligonucleotides containing RSRF-binding sites function as promoter elements in transfection assays. Like SRF-binding sites, RSRF-binding sites are found in the regulatory sequences of a number of growth factor-inducible and muscle-specific genes, and we show that RSRF polypeptides are components of previously characterized binding activities that interact with these elements. We discuss the potential role of RSRF proteins in the regulation of these genes.

1/7/38
11236766 Genuine Article#: GU645 Number of References: 48
Title: A CELLULAR PROTEIN MEDIATES ASSOCIATION OF P53 WITH THE E6 ONCOPROTEIN OF HUMAN PAPILLOMAVIRUS TYPE-16 OR TYPE-18
Author(s): HUIBREGTSE JM; SCHEFFNER M; HOWLEY PM
Corporate Source: NCI,TUMOR VIRUS BIOL LAB/BETHESDA//MD/20892

Journal: EMBO JOURNAL, 1991, V10, N13, P4129-4135
Language: ENGLISH Document Type: ARTICLE
Abstract: The E6 protein of human papillomavirus types 16 and 18 (HPV-16 and HPV-18) can stably associate with the p53 protein in vitro. In the presence of rabbit reticulocyte lysate, this association leads to the specific degradation of p53 through the ubiquitin-dependent proteolysis system. We have examined the E6-p53 complex in more detail and have found that association of E6 with p53 is mediated by an additional cellular factor. This factor is present in rabbit reticulocyte lysate, primary human keratinocytes and in each of five human cell lines examined. The factor is designated E6-AP, for E6-associated protein, based on the observation that the E6 proteins of HPV-16 and 18 can form a stable complex with the factor in the absence of p53, whereas p53 association with the factor can be detected only in the presence of E6. Gel filtration and coprecipitation experiments indicate that E6-AP is a monomeric protein of approximately 100 kDa.

1/7/39
11231844 Genuine Article#: GT480 Number of References: 20
Title: PHASING THE CONFORMATIONAL UNIT OF SPECTRIN
Author(s): WINOGRAD E; HUME D; BRANTON D
Corporate Source: HARVARD UNIV,DEPT CELLULAR & DEV BIOL,BIOL LABS/CAMBRIDGE//MA/02138; HARVARD UNIV,DEPT CELLULAR & DEV BIOL,BIOL LABS/CAMBRIDGE//MA/02138
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N23, P10788-10791
Language: ENGLISH Document Type: ARTICLE
Abstract: Many proteins contain a repetitive sequence motif, which implies that they contain a repetitive structural motif. Spectrin and the related proteins dystrophin and alpha-actinin consist largely of repeated motifs of 100-120 residues. But the repeating motif is degenerate and it has been difficult to define the boundaries of the repeating sequence unit or its corresponding structural unit. We have determined at which residues the structural units that correspond to spectrin's repeating 106-amino acid motifs begin and end. Drosophila alpha-spectrin cDNAs were expressed in bacteria to show that single segments (106 amino acids) and pairs of segments encoded by selected regions of spectrin cDNA can fold into stable conformations whose biophysical and biochemical properties are similar to those of native spectrin. Because such folding was critically dependent on the phasing of the expressed sequence with respect to the apparent boundaries of the repeating motifs, our data provide experimental evidence that relates the boundaries of the folded, conformational unit to the chemical sequence of repeating motifs.

1/7/40
11231839 Genuine Article#: GT480 Number of References: 25
Title: IMMUNOLOGICAL IDENTIFICATION AND CHARACTERIZATION OF A DELAYED RECTIFIER K+ CHANNEL POLYPEPTIDE IN RAT-BRAIN
Author(s): TRIMMER JS
Corporate Source: SUNY STONY BROOK,DEPT BIOCHEM & CELL BIOL/STONYBROOK//NY/11794
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N23, P10764-10768
Language: ENGLISH Document Type: ARTICLE
Abstract: Antibodies specific for the drk1 polypeptide were used to characterize the corresponding protein in rat brain. Recombinant and synthetic immunogens containing fragments of the drk1 polypeptide were

produced. Antibodies raised to these immunogens display monospecific reactions with the same 130-kDa polypeptide on immunoblots of adult rat brain membranes. Immunoprecipitation of I-125-labeled brain membranes identifies a 38-kDa peptide in tight association with the drk1 polypeptide. Immunohistochemical staining of sections of adult rat cortex shows that drk1 protein is restricted to neurons, where staining is present on dendrites and cell bodies but not on axons. These studies point to the value of such immunological reagents to the further characterization of the components of this delayed rectifier K+ channel in the mammalian central nervous system.

1/7/41
11227155 Genuine Article#: GR939 Number of References: 57
Title: THE CYSTEINE-RICH DOMAIN OF HUMAN PROTEINS, NEURONAL CHIMAERIN, PROTEIN-KINASE-C AND DIACYLGLYCEROL KINASE BINDS ZINC - EVIDENCE FOR THE INVOLVEMENT OF A ZINC-DEPENDENT STRUCTURE IN PHORBOL ESTER BINDING
Author(s): AHMED S; KOZMA R; LEE J; MONFRIES C; HARDEN N; LIM L
Corporate Source: INST NEUROL,DEPT NEUROCHEM,1 WAKEFIELD ST/LONDON WC1N 1PJ//ENGLAND/; INST NEUROL,DEPT NEUROCHEM,1 WAKEFIELD ST/LONDON WC1N 1PJ//ENGLAND/; NATL UNIV SINGAPORE,INST MOLEC & CELL BIOL/SINGAPORE 0511//SINGAPORE/
Journal: BIOCHEMICAL JOURNAL, 1991, V280, NOV, P233-241
Language: ENGLISH Document Type: ARTICLE
Abstract: Diacylglycerol (DG) and its analogue phorbol 12-myristate 13-acetate (PMA) activate the ubiquitous phospholipid/Ca2+-dependent protein kinase, protein kinase C (PKC), and cause it to become tightly associated with membranes. DG is produced transiently as it is rapidly metabolized by DG kinase (DGK) to phosphatidic acid. Phorbol esters such as PMA are not metabolized and induced a prolonged membrane association of PKC. Until recently, PKC was the only known phorbol ester receptor. We have shown that a novel brain-specific cDNA, neuronal chimaerin (NC), expressed in Escherichia coli, binds phorbol ester with high affinity, stereospecificity and a phospholipid requirement [Ahmed, Kozma, Monfries, Hall, Lim, Smith & Lim (I 990) Biochem. J. 272, 767-773]. The proteins NC, PKC and DGK possess a cysteine-rich domain with the motif HX11/12CX2CX(n)CX2CX4HX2CX6/7C (where n varies between 12 and 14). The partial motif. CX2CX13CX2C, is present in a number of transcription factors including the steroid hormone receptors and the yeast protein, GAL4, in which zinc plays a structural role of co-ordinating cysteine residues and is essential for DNA binding (protein-nucleic acid interactions). The cysteine-rich domain of NC and PKC is required for phospholipid-dependent phorbol ester binding, suggesting an involvement of this domain in protein-lipid interactions. We have expressed recombinant NC, PKC and DGK glutathione S-transferase and TrpE fusion proteins in E. coli to investigate the relationship between the cysteine-rich motif, HX11/12CX2CX10-14CX2CX4HX2CX6/7C, zinc and phorbol ester binding. The cysteine-rich domain of NC, PKC and DGK bound Zn-65(2+) but only NC and PKC bound [H-3]phorbol 12,13-dibutyrate. When NC and PKC were subjected to treatments known to remove metal ions from GAL4 and the human glucocorticoid receptor, phorbol ester binding was inhibited. These data provide evidence for the role of a zinc-dependent structure in phorbol ester binding.

1/7/42
11222208 Genuine Article#: GR785 Number of References: 16
Title: PURIFICATION OF HIS-TAGGED PROTEINS IN NONDENATURING CONDITIONS SUGGESTS A CONVENIENT METHOD FOR PROTEIN-INTERACTION STUDIES

Author(s): HOFFMANN A; ROEDER RG
Corporate Source: ROCKEFELLER UNIV,BIOCHEM & MOLEC BIOL LAB/NEW YORK//NY/10021
Journal: NUCLEIC ACIDS RESEARCH, 1991, V19, N22, P6337-6338
Language: ENGLISH Document Type: NOTE

1/7/43
11217312 Genuine Article#: GQ995 Number of References: 29
Title: EXPRESSION OF THE PEA GENE PSMTA IN ESCHERICHIA-COLI - METAL-BINDING PROPERTIES OF THE EXPRESSED PROTEIN
Author(s): TOMMEY AM; SHI JG; LINDSAY WP; URWIN PE; ROBINSON NJ
Corporate Source: UNIV DURHAM,DEPT BIOL SCI/DURHAM DH1 3LE//ENGLAND/
Journal: FEBS LETTERS, 1991, V292, N1-2, P48-52
Language: ENGLISH Document Type: ARTICLE
Abstract: The pea (Pisum sativum L.) gene PsMT(A) has an ORF encoding a predicted protein with sequence similarity to class I metallothioneins (MTs). To examine the metal-binding properties of the PsMT(A) protein it has been expressed in E. coli as a carboxyterminal extension of glutathione-S-transferase (GST). Metal ions were associated with the expressed protein when purified from lysates of E. coli grown in metal supplemented media. The pH of half-dissociation of Zn, Cd and Cu ions from the recombinant fusion protein was determined to be 5.35, 3.95 and 1.45 respectively, compared with equivalent estimates of 4.50, 3.00 and 1.80 for equine renal MT.

1/7/44
11214314 Genuine Article#: GR632 Number of References: 16
Title: SCHISTOSOMA-MANSONI - IMMUNO-LOCALIZATION OF THE CALCIUM-BINDING PROTEIN-SM20
Author(s): HAVERCROFT JC; SMITH AL; WILLIAMS RH
Corporate Source: UNIV CAMBRIDGE,DEPT PATHOL,TENNIS COURT RD/CAMBRIDGE CB2 1QP//ENGLAND/
Journal: PARASITE IMMUNOLOGY, 1991, V13, N6, P593-604
Language: ENGLISH Document Type: ARTICLE
Abstract: The 20 kDa calcium binding protein of Schistosoma mansoni, Sm20, is expressed in all stages of the life cycle from the cercaria to the adult worm and in the egg, with equal levels of Sm20 present in adult male and female worms. Localization of Sm20 by immuno-electron microscopy using Sm20-specific antisera and the protein A gold technique demonstrated that the majority of Sm20 is expressed in muscle but that it may also be expressed at low levels in the tegument. These results suggest that Sm20 plays a role in the calcium mediated regulation of muscle contraction. However, it is not clear whether Sm20 acts as a reservoir for calcium in muscle or is directly involved in the regulatory mechanisms of contraction.

1/7/45
11208880 Genuine Article#: GQ837 Number of References: 38
Title: IGE AND IGG BINDING OF PEPTIDES EXPRESSED FROM FRAGMENTS OF CDNA-ENCODING THE MAJOR HOUSE DUST MITE ALLERGEN DER P I
Author(s): GREENE WK; CYSTER JG; CHUA KY; OBRIEN RM; THOMAS WR
Corporate Source: PRINCESS MARGARET HOSP,WESTERN AUSTRALIAN RES INST CHILD HLTH,GPO BOX D184/PERTH/WA 6001/AUSTRALIA/; PRINCESS MARGARET HOSP,WESTERN AUSTRALIAN RES INST CHILD HLTH,GPO BOX D184/PERTH/WA 6001/AUSTRALIA/; UNIV MELBOURNE,WESTERN GEN HOSP,DEPT MED/FOOTSCRAY/VIC 3011/AUSTRALIA/
Journal: JOURNAL OF IMMUNOLOGY, 1991, V147, N11, P3768-3773
Language: ENGLISH Document Type: ARTICLE

Abstract: Large peptides expressed from cDNA fragments of a clone encoding the mite allergen Der p I were able to bind IgE and IgG in sera from allergic individuals. The binding was found for peptides from sequences throughout the molecule, with at least five regions, comprising residues 1-56, 53-99, 98-140, 166-194, and 188-222. The only limitation was that more than 30 amino acid residues were required for consistent binding. Each of seven sera examined showed a different profile of antibody binding to the peptides. For the most part the pattern of IgE and IgG binding to the peptides for each serum was similar, demonstrating a concordant repertoire. In 5/7 sera, however, IgG bound to some peptides which had little or no IgE binding activity, thus showing more diverse specificities. It is suggested that some divergence of repertoire can develop during the maturation of the B cell response.

1/7/46
11205026 Genuine Article#: GQ080 Number of References: 22
Title: THE USE OF THE POLYMERASE CHAIN-REACTION TO MAP CD4+ T-CELL EPITOPES
Author(s): NAKAGAWA TY; VONGRAFENSTEIN H; SEARS JE; WILLIAMS J; JANEWAY CA; FLAVELL RA
Corporate Source: YALE UNIV,SCH MED,HOWARD HUGHES MED INST,IMMUNOBIOL SECT,310 CEDAR ST/NEW HAVEN//CT/06510; YALE UNIV,SCH MED,HOWARD HUGHES MED INST,IMMUNOBIOL SECT,310 CEDAR ST/NEW HAVEN//CT/06510; UNIV BRISTOL,DEPT BIOCHEM/BRISTOL BS8 1TH/AVON/ENGLAND/
Journal: EUROPEAN JOURNAL OF IMMUNOLOGY, 1991, V21, N11, P2851-2855
Language: ENGLISH Document Type: ARTICLE
Abstract: CD4+ T cells recognize processed exogenous antigen in the form of peptides bound to syngeneic major histocompatibility complex class II molecules on antigen-presenting cells. We have developed a novel and convenient method to synthesize and map CD4+ T cell epitopes of cloned antigens using polymerase chain reaction (PCR)-directed construction of genes expressing recombinant protein fragments. Unique restriction sites incorporated into the PCR primers were employed for the unidirectional cloning of gene fragments into a bacterial expression vector that can be induced to high-level expression. The bacterial lysate could be used directly in T cell proliferation assays. Overlapping recombinant fragments spanning the entire protein were generated and tested. The length of the sequence containing the epitope was further reduced by utilizing PCR to generate 3′ truncations. Finally, a small number of overlapping peptides spanning a sequence of 39 amino acids were synthesized to identify a thirteen-amino acid peptide epitope within chicken transferrin that stimulates the T helper cell clone D10.G4.1. PCR-directed construction of fragments of antigen allows for optimal design of strategies for the mapping and analysis of CD4+ T cell epitopes.

1/7/47
11199175 Genuine Article#: GP878 Number of References: 67
Title: ANALYSIS OF TRANSACTIVATION BY HUMAN PAPILLOMAVIRUS TYPE-16 E7 AND ADENOVIRUS-12S E1A SUGGESTS A COMMON MECHANISM
Author(s): PHELPS WC; BAGCHI S; BARNES JA; RAYCHAUDHURI P; KRAUS V; MUNGER K; HOWLEY PM; NEVINS JR
Corporate Source: BURROUGHS WELLCOME CO,DIV VIROL/RES TRIANGLE PK//NC/27709; DUKE UNIV,MED CTR,HOWARD HUGHES MED INST,GENET SECT/DURHAM//NC/27710; NCI,TUMOR VIRUS BIOL LAB/BETHESDA//MD/20892
Journal: JOURNAL OF VIROLOGY, 1991, V65, N12, P6922-6930
Language: ENGLISH Document Type: ARTICLE
Abstract: The human papillomavirus E7 gene product is an oncoprotein with

properties similar to those of the adenovirus E1A proteins. The human papillomavirus E7 proteins possess substantial amino acid sequence similarity to portions of conserved regions 1 and 2 of E1A, and the human papillomavirus type 16 E7 protein trans-activates the adenovirus E2 early promoter. Analysis of point mutations in the E2 promoter indicated that the E2F recognition sites were critical to E7 stimulation. In contrast to the activation of the E2 promoter, E7 could not trans-activate various other E1A-inducible promoters. Although the promoter specificity for E7 differs from that of 13S E1A trans activation, it is very similar to activation by the E1A 12S product. Moreover, analysis of the E7 protein has suggested that amino acid sequences critical for trans activation include those shared with E1A within conserved region 2. Biochemical studies demonstrate that the E7 protein, like the 12S E1A product, can alter the interaction of cellular factors with the E2F transcription factor. We therefore conclude that E7 trans activation is functionally related to that mediated by the 12S E1A product.

1/7/48
11198206 Genuine Article#: GQ121 Number of References: 33
Title: DE NOVO PURINE NUCLEOTIDE BIOSYNTHESIS - CLONING, SEQUENCING AND EXPRESSION OF A CHICKEN PURH CDNA-ENCODING 5-AMINOIMIDAZOLE-4-CARBOXAMIDE-RIBONUCLEOTIDE TRANSFORMYLASE-IMP CYCLOHYDROLASE
Author(s): NI LY; GUAN KL; ZALKIN H; DIXON JE
Corporate Source: PURDUE UNIV,DEPT BIOCHEM/W LAFAYETTE//IN/47907; PURDUE UNIV,DEPT BIOCHEM/W LAFAYETTE//IN/47907
Journal: GENE, 1991, V106, N2, P197-205
Language: ENGLISH Document Type: ARTICLE
Abstract: The PurH cDNA, encoding 5-aminoimidazole-4-carboxamide-ribonucleotide (AICAR) transformylase-inosine monophosphate cyclohydrolase (ATIC), was cloned by functional complementation of an Escherichia coli purH mutant using a chicken liver cDNA expression library. This represents the first report of the cloning of any eukaryotic ATIC-encoding cDNA (PurH). The avian ATIC mRNA is 2.3 kb long and encodes a protein with an M(r) of 64 422. The deduced amino acid sequence is 36% identical to the bacterial purH-encoded enzymes from Bacillus subtilis and E. coli. The avian cDNA was expressed as a glutathione S-transferase (GST) fusion protein that was purified in a single step by affinity chromatography. A novel vector was employed which permits rapid and highly efficient cleavage of the GST fusion protein yielding 10 mg of purified PurH product per liter of bacterial culture. K(m) values were determined with the purified fusion protein utilizing AICAR and (6-R) N-10-formyl-tetrahydrofolate as substrates. These values compare favorably with the isolated avian enzyme, supporting the idea that kinetic, as well as other physical properties of the recombinant fusion protein are similar to the native avian enzyme. Large quantities of purified enzyme and the ability to generate site-directed mutations should make mechanistic studies possible. The recombinant enzyme also affords a simple and reliable approach to identifying new antifolates.

1/7/49
11195297 Genuine Article#: GP804 Number of References: 50
Title: EXPRESSION OF CALRETICULIN IN ESCHERICHIA-COLI AND IDENTIFICATION OF ITS CA2+ BINDING DOMAINS
Author(s): BAKSH S; MICHALAK M
Corporate Source: UNIV ALBERTA,CARDIOVASC DIS RES GRP/EDMONTON T6G

2S2/ALBERTA/CANADA/; UNIV ALBERTA,CARDIOVASC DIS RES GRP/EDMONTON T6G 2S2/ALBERTA/CANADA/; UNIV ALBERTA,DEPT PEDIAT/EDMONTON T6G 2S2/ALBERTA/CANADA/; UNIV ALBERTA,DEPT BIOCHEM/EDMONTON T6G 2S2/ALBERTA/CANADA/
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N32, P21458-21465
Language: ENGLISH Document Type: ARTICLE
Abstract: Recombinant calreticulin and discrete domains of calreticulin were expressed in Escherichia coli, using the glutathione S-transferase fusion protein system, and their Ca" binding properties were determined. Native calreticulin bound 1 mol of Ca2+/mol of protein with high affinity, and also bound approximately 20 mol of Ca2+/mol of protein with low affinity. Both Ca2+ binding sites were present in the recombinant calreticulin indicating that proper folding of the protein was achieved using this system.

Calreticulin is structurally divided into three distinct domains: the N-domain encompassing the first 200 residues; the P-domain which is enriched in proline residues (residue 187-317); and the C-domain which covers the carboxyl-terminal quarter of the protein (residues 310-401), and contains a high concentration of acidic residues. These domains were expressed in E. coli, isolated, and purified, and their Ca2+ binding properties were analyzed. The C-domain bound approximately 18 mol of Ca2+/mol of protein with a dissociation constant of approximately 2 mM. The P-domain bound approximately 0.6-1 mol of Ca2+/ mol of protein with a dissociation constant of approximately 10-mu-M. The P-domain and the C-domain, when expressed together as the P+C-domain, bound Ca2+ with both high affinity and low affinity, reminiscent of both full length recombinant calreticulin and native calreticulin. In contrast the N-domain, did not bind any detectable amount of Ca-45(2+).

We conclude that calreticulin has two quite distinct types of Ca2+ binding sites, and that these sites are in different structural regions of the molecule. The P-domain binds Ca2+ with high affinity and low capacity, whereas the C-domain binds Ca2+ with low affinity and high capacity.

1/7/50
11183314 Genuine Article#: GP038 Number of References: 46
Title: TAT REGULATES BINDING OF THE HUMAN-IMMUNODEFICIENCY-VIRUS TRANSACTIVATING REGION RNA LOOP-BINDING PROTEIN TRP-185
Author(s): WU F; GARCIA J; SIGMAN D; GAYNOR R
Corporate Source: UNIV TEXAS,HLTH SCI CTR,SW MED SCH,DEPT INTERNAL MED/DALLAS//TX/75235; UNIV TEXAS,HLTH SCI CTR,SW MED SCH,DEPT INTERNAL MED/DALLAS//TX/75235; UNIV CALIF LOS ANGELES,SCH MED,DEPT MICROBIOL &IMMUNOL/LOS ANGELES//CA/90024; UNIV CALIF LOS ANGELES,SCH MED,DEPT BIOL CHEM/LOS ANGELES//CA/90024
Journal: GENES & DEVELOPMENT, 1991, V5, N11, P2128-2140
Language: ENGLISH Document Type: ARTICLE
Abstract: The TAR element extending from -17 to +80 in the human immunodeficiency virus long terminal repeat (HIV LTR) is required for activation of gene expression by the tat trans-activator protein. TAR RNA forms a stable stem-loop structure, and mutagenesis studies indicate that the stem structure, the primary sequence of the loop, and the bulge element are the major determinants for tat activation. RNA gel retardation analysis demonstrates that both tat and cellular proteins bind to TAR RNA, but the mechanism by which these proteins increase HIV gene expression is unknown. We have fractionated HeLa cell

nuclear extracts in an attempt to identify cellular proteins that bind to TAR RNA and are involved in regulating HIV gene expression. RNA gel retardation and UV cross-linking reveal that a cellular protein of 185 kD, which we designate TAR RNA-binding protein 185 (TRP-185), binds with both high affinity and marked specificity to TAR RNA. RNA gel retardation and competition analyses indicate that TRP-185 binding is strongly dependent on the TAR RNA loop sequences. The binding of TRP-185 is modulated by both a set of cellular cofactors and the tat protein. Highly purified preparations of TRP-185 are capable of activating in vitro transcription of wild-type, but not mutated, HIV LTR chloramphenicol acetyltransferase (CAT) constructs. These results characterize a positively acting cellular RNA-binding factor, TRP-185, which is involved in the regulation of HIV gene expression.

1/7/51
11180688 Genuine Article#: GN725 Number of References: 34
Title: PEXPRESS - A FAMILY OF EXPRESSION VECTORS CONTAINING A SINGLE TRANSCRIPTION UNIT ACTIVE IN PROKARYOTES, EUKARYOTES AND INVITRO
Author(s): FORMAN BM; SAMUELS HH
Corporate Source: NYU MED CTR,DEPT MED/NEW YORK//NY/10016; NYU MED CTR,DEPT MED/NEW YORK//NY/10016; NYU MED CTR,DEPT PHARMACOL/NEW YORK//NY/10016
Journal: GENE, 1991, V105, N1, P9-15
Language: ENGLISH Document Type: ARTICLE
Abstract: We have constructed a family of expression vectors containing a single transcription unit that is active in Escherichia coli, eukaryotic cells, and in coupled in vitro transcription-translation systems. These vectors use the Rous sarcoma virus-long terminal repeat (RSV-LTR) as the promoter/enhancer for eukaryotic cells. In vitro transcription is made possible by inclusion of a bacteriophage T7 promoter. This same promoter is actively transcribed in E. coli that produce T7 RNA polymerase. Other features of this transcription unit include a high-efficiency eukaryotic translation start codon, a phage f1 origin of DNA replication for site-directed mutagenesis and a three-frame stop codon that facilitates C-terminal deletion mutagenesis. We term this vector family, pEXPRESS.

1/7/52
11170708 Genuine Article#: GM803 Number of References: 45
Title: INTERLEUKIN-10(IL-10) INHIBITS CYTOKINE SYNTHESIS BY HUMAN MONOCYTES - AN AUTOREGULATORY ROLE OF IL-10 PRODUCED BY MONOCYTES
Author(s): MALEFYT RD; ABRAMS J; BENNETT B; FIGDOR CG; DEVRIES JE
Corporate Source: DNAX RES INST MOLEC & CELLULAR BIOL INC,DEPT HUMAN IMMUNOL,901 CALIF AVE/PALO ALTO//CA/94304; DNAX RES INST MOLEC & CELLULAR BIOL INC,DEPT HUMAN IMMUNOL,901 CALIF AVE/PALO ALTO//CA/94304; DNAX RES INST MOLEC & CELLULAR BIOL INC,DEPT IMMUNOL/PALO ALTO//CA/94304; NETHERLANDS CANC INST,DIV IMMUNOL/1066 CX AMSTERDAM//NETHERLANDS/
Journal: JOURNAL OF EXPERIMENTAL MEDICINE, 1991, V174, N5, P1209-1220
Language: ENGLISH Document Type: ARTICLE
Abstract: In the present study we demonstrate that human monocytes activated by lipopolysaccharides (LPS) were able to produce high levels of interleukin 10 (IL,10), previously designated cytokine synthesis inhibitory factor (CSIF), in a dose dependent fashion. IL-10 was detectable 7 h after activation of the monocytes and maximal levels of IL-10 production were observed after 24-48 h. These kinetics indicated that the production of IL-10 by human monocytes was relatively late as compared to the production of IL-1-alpha, IL-1-beta, IL-6, IL-8, tumor necrosis factor alpha(TNF-alpha), and granulocyte colony-stimulating

factor (G-CSF), which were all secreted at high levels 4-8 h after activation. The production of IL-10 by LPS activated monocytes was, similar to that of IL-1-alpha, IL-1-beta, IL-6, IL-8, TNF-alpha, granulocyte-macrophage colony-stimulating factor (GM-CSF), and G-CSF, inhibited by IL-4. Furthermore we demonstrate here that IL-10, added to monoCytes, activated by interferon-gamma(IFN-gamma), LPS, or combinations of LPS and IFN-gamma at the onset of the cultures, strongly inhibited the production of IL-1-alpha, IL-1-beta, IL-6, IL-8, TNF-alpha, GM-CSF, and G-CSF at the transcriptional level. Viral-IL-10, which has similar biological activities on human cells, also inhibited the production of TNF-alpha and GM-CSF by monocytes following LPS activation. Activation of monocytes by LPS in the presence of neutralizing anti-IL-10 monoclonal antibodies resulted in the production of higher amounts of cytokines relative to LPS treatment alone, indicating that endogenously produced IL-10 inhibited the production of IL-1-alpha, IL-1-beta, IL-6, IL-8, TNF-alpha, GM-CSF, and G-CSF. In addition, IL-10 had autoregulatory effects since it strongly inhibited IL-10 mRNA synthesis in LPS activated monocytes. Furthermore, endogenously produced IL-10 was found to be responsible for the reduction in class II major histocompatibility complex (MHC) expression following activation of monocytes with LPS. Taken together our results indicate that IL-10 has important regulatory effects on immunological and inflammatory responses because of its capacity to downregulate class II MHC expression and to inhibit the production of proinflammatory cytokines by monocytes.

1/7/53
11170097 Genuine Article#: GN001 Number of References: 29
Title: 39-KDA PROTEIN MODULATES BINDING OF LIGANDS TO LOW-DENSITY-LIPOPROTEIN RECEPTOR-RELATED PROTEIN ALPHA-2-MACROGLOBULIN RECEPTOR
Author(s): HERZ J; GOLDSTEIN JL; STRICKLAND DK; HO YK; BROWN MS
Corporate Source: UNIV TEXAS,SW MED CTR,DEPT MOLEC GENET/DALLAS//TX/75235; AMER RED CROSS,BIOCHEM LAB/ROCKVILLE//MD/20855
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N31, P21232-21238
Language: ENGLISH Document Type: ARTICLE
Abstract: A 39-kDa protein of unknown function has previously been reported to copurify with the low density lipoprotein receptor-related protein (LRP)/alpha-2-macroglobulin receptor. In this study we demonstrate that a recombinant 39-kDa fusion protein can reversibly bind to the 515-kDa subunit of the LRP/alpha-2-macroglobulin receptor. This interaction inhibits the binding and uptake of the receptor's two known ligands: 1) beta-migrating very low density lipoproteins activated by enrichment with apoprotein E and 2) alpha-2-macroglobulin activated by incubation with plasma proteases or methylamine. A potential in vivo role of the 39-kDa protein is to modulate the uptake of apoE-enriched lipoproteins and activated alpha-2-macroglobulin in hepatic and extrahepatic tissues.

1/7/54
11167681 Genuine Article#: GM530 Number of References: 15
Title: THE MAJOR CYSTEINE PROTEINASE (CRUZIPAIN) FROM TRYPANOSOMA-CRUZI IS ANTIGENIC IN HUMAN INFECTIONS
Author(s): MARTINEZ J; CAMPETELLA O; FRASCH ACC; CAZZULO JJ
Corporate Source: UNIV BUENOS AIRES,FAC CIENCIAS EXACTAS & NAT,CONICET,FDN CAMPOMAR/RA-1405 BUENOS AIRES//ARGENTINA/; UNIV BUENOS AIRES,FAC CIENCIAS EXACTAS & NAT,CONICET,FDN CAMPOMAR/RA-1405 BUENOS AIRES//ARGENTINA/

Journal: INFECTION AND IMMUNITY, 1991, V59, N11, P4275-4277
Language: ENGLISH Document Type: NOTE
Abstract: Antibodies against the major cysteine proteinase (cruzipain) from Trypanosoma cruzi were detected in human sera obtained from patients with chronic Chagas' disease. Not only the intact 60-kDa enzyme but also its 25-kDa self-proteolysis fragment are antigenic in vivo. Although T. cruzi antigens 13 and 36 also reacted with the apparently monospecific antiproteinase serum, the antigenicity of cruzipain to human patients is genuine, since its reactivity was not modified by the adsorption of human sera with the recombinant proteins 13 and 36.

1/7/55
11167013 Genuine Article#: GM228 Number of References: 39
Title: DISTRIBUTION AND FUNCTION OF THE LETHAL OF SCUTE GENE-PRODUCT DURING EARLY NEUROGENESIS IN DROSOPHILA
Author(s): MARTINBERMUDO MD; MARTINEZ C; RODRIGUEZ A; JIMENEZ F
Corporate Source: UNIV AUTONOMA MADRID,CSIC,CTR BIOL MOLEC/E-28049 MADRID//SPAIN/; UNIV AUTONOMA MADRID,CSIC,CTR BIOL MOLEC/E-28049 MADRID//SPAIN/
Journal: DEVELOPMENT, 1991, V113, N2, P445-454
Language: ENGLISH Document Type: ARTICLE
Abstract: Genes of the achaete-scute complex (ASC) participate in the formation of the central nervous system in the Drosophila embryo. Previous genetic analyses have indicated that lethal of scute (l'sc) is the most important gene of the complex in that process. We have obtained antibodies against the l'sc protein to study the expression of the gene during early neurogenesis. The protein is found in groups of embryonic neuroectodermal cells, analogous to the proneural clusters that precede the appearance of precursors of peripheral sensory organs in imaginal epithelia. The groups appear in different regions of the neuroectoderm, accompanying the three successive waves of neuroblast segregation. Most neuroblasts delaminate from these clusters and express position-specific levels of l'sc protein. No significant differences have been found between the distribution of l'sc RNA and protein. Phenotypic analysis of a l'sc deficiency has shown that the gene is required for neuroblast commitment, although this requirement is less widespread than the domain of l'sc expression, suggesting a high degree of redundancy in the function of genes that participate in the process of neuroblast segregation. The ASC genes have been postulated to play a role in the control of NB identity, revealed by the generation of a defined lineage of identifiable neurons. However, our study in l'sc mutants of the expression of fushi tarazu, engrailed, and even-skipped, used as markers of neuronal identity, has not provided evidence to support this hypothesis.

1/7/56
11166119 Genuine Article#: GM344 Number of References: 21
Title: FRAMESHIFTING IN GENE-10 OF BACTERIOPHAGE-T7
Author(s): CONDRON BG; ATKINS JF; GESTELAND RF
Corporate Source: UNIV UTAH,DEPT HUMAN GENET/SALT LAKE CITY//UT/84112; UNIV UTAH,DEPT HUMAN GENET/SALT LAKE CITY//UT/84112; UNIV UTAH,HOWARD HUGHES MED INST/SALT LAKE CITY//UT/84112
Journal: JOURNAL OF BACTERIOLOGY, 1991, V173, N21, P6998-7003
Language: ENGLISH Document Type: ARTICLE
Abstract: Gene 10 of bacteriophage T7, which encodes the most abundant capsid protein, has two products: a major product, 10A (36 kDa), and a minor product, 10B (41 kDa). 10B is produced by frameshifting into the -1 frame near the end of the 10A coding frame and is incorporated into

the capsid. The frameshift occurs at a frequency of about 10% and is conserved in bacteriophage T3. This study shows that sequences important to frameshifting include the originally proposed frameshift site, consisting of overlapping phenylalanine codons and the 3' noncoding region that includes the transcriptional terminator over 200 bases downstream of the frameshift site. The frameshift occurs at the overlapping phenylalanine codons as determined from peptide sequencing data. Complementation studies show that there is only a very weak phenotype associated with phage infections in which there is no 10A frameshifting. Capsids from such infections are devoid of 10B and are as stable as wild-type capsids.

1/7/57
11159843 Genuine Article#: GL996 Number of References: 49
Title: 2 GENETICALLY AND MOLECULARLY DISTINCT FUNCTIONS INVOLVED IN EARLY NEUROGENESIS RESIDE WITHIN THE ENHANCER OF SPLIT LOCUS OF DROSOPHILA-MELANOGASTER
Author(s): DELIDAKIS C; PREISS A; HARTLEY DA; ARTAVANISTSAKONAS S
Corporate Source: YALE UNIV,DEPT CELL BIOL,HOWARD HUGHES MED INST/NEW HAVEN//CT/06511; YALE UNIV,DEPT BIOL/NEW HAVEN//CT/06511; UNIV BASEL,BIOCTR,DEPT CELL BIOL/CH-4056 BASEL//SWITZERLAND/; IMPERIAL COLL SCI TECHNOL & MED,DEPT BIOCHEM/LONDON SW7 2AZ//ENGLAND/
Journal: GENETICS, 1991, V129, N3, P803-823
Language: ENGLISH Document Type: ARTICLE
Abstract: Molecular correlation of the genetic aspects of the function of the neurogenic gene Enhancer of split [E(spl)] has previously been hampered by the densely transcribed nature of the chromosomal region within which it resides. We present data indicating that two distinct molecular species contribute to E(spl) function. Analysis of new E(spl) alleles has allowed us to define two complementing functions within the locus. Subsequent phenotypic analysis of different E(spl) deficiencies combined with P element-transformed constructs has demonstrated that these two functions correspond to: (1) a family of helix-loop-helix (HLH) protein-encoding genes and (2) the single copy gene E(spl) m9/10, whose product shares homology with G-protein beta subunits. The zygotically active E(spl) HLH genes can, at least partially, substitute for one another's functions and their total copy number determines the activity of the locus. E(spl) m9/10 acts synergistically with the E(spl) HLH genes and other neurogenic genes in the process of neurogenesis. The maternal component of E(spl) m9/10 has the most pronounced effect in neurogenesis, while its zygotic component is predominantly required during postembryonic development. The lethality of trans-heterozygotes of null E(spl) deficiency alleles with a strong Delta point mutation is a result of the concomitant reduction in activity of both E(spl) HLH and m9/10 functions. Immunocytochemical localization of the E(spl) m9/10 protein has revealed that it is a ubiquitously distributed nuclear component in embryonic, larval and imaginal tissues.

1/7/58
11155199 Genuine Article#: GL382 Number of References: 47
Title: ID PROTEINS ID1 AND ID2 SELECTIVELY INHIBIT DNA-BINDING BY ONE CLASS OF HELIX-LOOP-HELIX PROTEINS
Author(s): SUN XH; COPELAND NG; JENKINS NA; BALTIMORE D
Corporate Source: WHITEHEAD INST BIOMED RES,9 CAMBRIDGE CTR/CAMBRIDGE//MA/02142; WHITEHEAD INST BIOMED RES,9 CAMBRIDGE CTR/CAMBRIDGE//MA/02142; NCI,FREDERICK CANC RES & DEV CTR,ABL BASIC RES PROGRAM,MAMMALIAN GENET LAB/FREDERICK//MD/21702; ROCKEFELLER UNIV/NEW

YORK//NY/10021
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1991, V11, N11, P5603-5611
Language: ENGLISH Document Type: ARTICLE
Abstract: The DNA binding activities of some basic region and putative helix-loop-helix (bHLH)-containing transcriptional factors can be inhibited by the Id protein. Because Id contains the HLH motif for dimerization but not the basic amino acid region for DNA binding, heterodimers of Id with bHLH transcriptional factors may not bind to DNA. We have isolated and characterized the gene and cDNA clones for a new Id protein, designated Id2. The Id2 protein contains a helix-loop-helix motif similar to that of the previously described Id protein (referred to here as Id1), but the two proteins are different elsewhere. Id1 and Id2 are encoded by two unlinked genes, as shown by chromosome mapping. The two Id proteins have similar inhibitory activities. They selectively bind to and inhibit the function of one set of bHLH proteins, typified by E2A.E47 and E2B.m3, but not that of the other set, including TFE3, USF, and AP4. The Id proteins also homodimerize poorly. Expression of both Id genes is down-regulated during differentiation in a variety of cell types.

1/7/59
11147976 Genuine Article#: GL292 Number of References: 47
Title: IDENTIFICATION AND LOCALIZATION OF MUSCARINIC ACETYLCHOLINE-RECEPTOR PROTEINS IN BRAIN WITH SUBTYPE-SPECIFIC ANTIBODIES
Author(s): LEVEY AI; KITT CA; SIMONDS WF; PRICE DL; BRANN MR
Corporate Source: JOHNS HOPKINS UNIV,SCH MED,DEPT NEUROL,509 PATHOL BLDG,600 N WOLFE ST/BALTIMORE//MD/21205; JOHNS HOPKINS UNIV,SCH MED,DEPT PATHOL/BALTIMORE//MD/21205; JOHNS HOPKINS UNIV,SCH MED,DEPT NEUROSCI/BALTIMORE//MD/21205; NIDDKD,METAB DIS BRANCH/BETHESDA//MD/20892; NINCDS,MOLEC BIOL LAB/BETHESDA//MD/20892
Journal: JOURNAL OF NEUROSCIENCE, 1991, V11, N10, P3218-3226
Language: ENGLISH Document Type: ARTICLE
Abstract: mRNAs encoding five genetically distinct muscarinic ACh receptors are present in the CNS. Because of their pharmacological similarities, it has not been possible to detect the individual encoded proteins; thus, their physiological functions are not well defined. To characterize the family of proteins, a panel of subtype-selective antibodies was generated against recombinant muscarinic receptor proteins and shown to bind specifically to each of the cloned receptors. Using immunoprecipitation, three receptor proteins (m1, m2, and m4) accounted for the vast majority of the total solubilized muscarinic binding sites in rat brain. These receptor subtypes had marked differences in regional and cellular localization as shown by immunocytochemistry. The m1-protein was present in cortex and striatum and was localized to cell bodies and neurites, consistent with its role as a major postsynaptic muscarinic receptor. The m2-receptor protein was abundant in basal forebrain, scattered striatal neurons, mesopontine tegmentum, and cranial motor nuclei; this distribution is similar to that of cholinergic neurons and suggests that m2 is an autoreceptor. However, m2 was also present in noncholinergic cortical and subcortical structures, providing evidence that this subtype may presynaptically modulate release of other neurotransmitters and/or function postsynaptically. The m4-receptor was enriched in neostriatum, olfactory tubercle, and islands of Calleja, indicating an important role in extrapyramidal function. These results clarify the roles of these genetically defined receptor proteins in cholinergic transmission in brain. Since the nonselective muscarinic drugs used in the treatment of patients with neurological disease produce many side

effects, the characterization of receptor subtypes, including cellular and subcellular localization, will be of great value in defining the targets for the development of more effective and specific therapeutic agents.

1/7/60
11146028 Genuine Article#: GL470 Number of References: 54
Title: ADENOVIRUS E1A ACTIVATION DOMAIN BINDS THE BASIC REPEAT IN THE TATA BOX TRANSCRIPTION FACTOR
Author(s): LEE WS; KAO CC; BRYANT GO; LIU X; BERK AJ
Corporate Source: UNIV CALIF LOS ANGELES,INST MOLEC BIOL,DEPT MICROBIOL & MOLEC GENET/LOS ANGELES//CA/90024
Journal: CELL, 1991, V67, N2, P365-376
Language: ENGLISH Document Type: ARTICLE
Abstract: The adenovirus large E1A protein is a potent activator of transcription. We use several different experimental approaches to demonstrate that the large E1A protein binds specifically and stably to the TATA box-binding factor (TFIID), the general polymerase II transcription factor that initiates assembly of transcription complexes. Sedimentation velocity centrifugation revealed that TFIID and E1A form a heterodimer in vitro. We demonstrate that the activation domain of E1A (conserved region 3) binds to TFIID. E1A interacts with a 51 residue region from the conserved C-terminal domain of TFIID that includes a repeat of basic residues between the homologous direct repeats of TFIID. Analysis of TFIID binding by various E1A mutants indicates that TFIID binding is necessary, although not sufficient, for E1A transactivation.

1/7/61
11146005 Genuine Article#: GL070 Number of References: 53
Title: PRIMARY STRUCTURE OF A PLASMODIUM-FALCIPARUM RHOPTRY ANTIGEN
Author(s): BROWN HJ; COPPEL RL
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1991, V49, N1, P99-110
Language: ENGLISH Document Type: ARTICLE
Abstract: The high-molecular-weight rhoptry complex of Plasmodium falciparum consists of 3 non-covalently associated polypeptides of 150, 135 and 105 kDa. We present the complete nucleotide sequence of the 105-kDa (RhopH3) component of this complex derived from analysis of genomic and cDNA clones. The genomic structure is unusually complex for P. falciparum, consisting of 7 exons including 2 mini-exons of 19 and 21 amino acids. The sequence lacks tandem repeats and is conserved among several parasite isolates, B cell epitopes that induce antibody responses during natural infection were mapped to five different regions of the polypeptide.

1/7/62
11145864 Genuine Article#: GL078 Number of References: 31
Title: SPECIFIC REACTIVITY OF RECOMBINANT HUMAN PDC-E1-ALPHA IN PRIMARY BILIARY-CIRRHOSIS
Author(s): IWAYAMA T; LEUNG PSC; COPPEL RL; ROCHE TE; PATEL MS; MIZUSHIMA Y ; NAKAGAWA T; DICKSON R; GERSHWIN ME
Corporate Source: UNIV CALIF DAVIS,SCH MED,DIV RHEUMATOL ALLERGY & CLIN IMMUNOL,TB 192/DAVIS//CA/95616; UNIV CALIF DAVIS,SCH MED,DIV RHEUMATOL ALLERGY & CLIN IMMUNOL,TB 192/DAVIS//CA/95616; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/;

KANSAS STATE UNIV AGR & APPL SCI,DEPT BIOCHEM/MANHATTAN//KS/66506; CASE WESTERN RESERVE UNIV,SCH MED,DEPT BIOCHEM/CLEVELAND//OH/44106; ST MARIANNA MED UNIV,SCH MED/KAWASAKI/KANAGAWA 213/JAPAN/; MAYO CLIN & MAYO FDN,DEPT GASTROENTEROL/ROCHESTER//MN/55905
Journal: JOURNAL OF AUTOIMMUNITY, 1991, V4, N5, P769-778
Language: ENGLISH Document Type: ARTICLE

1/7/63
11145713 Genuine Article#: GK786 Number of References: 19
Title: PLASMODIUM-FALCIPARUM - THE CALMODULIN GENE IS NOT AMPLIFIED OR OVEREXPRESSED IN CHLOROQUINE RESISTANT OR SENSITIVE ISOLATES
Author(s): COWMAN AF; GALATIS D
Corporate Source: WALTER & ELIZA HALL INST MED RES/MELBOURNE 3050//AUSTRALIA/
Journal: EXPERIMENTAL PARASITOLOGY, 1991, V73, N3, P269-275
Language: ENGLISH Document Type: ARTICLE

1/7/64
11144704 Genuine Article#: GL696 Number of References: 29
Title: STRUCTURE OF DOMAIN-1 OF RAT LYMPHOCYTE-T CD2 ANTIGEN
Author(s): DRISCOLL PC; CYSTER JG; CAMPBELL ID; WILLIAMS AF
Corporate Source: UNIV OXFORD,DEPT BIOCHEM/OXFORD OX1 3QU//ENGLAND/; UNIV OXFORD,SIR WILLIAM DUNN SCH PATHOL,MRC,CELLULAR IMMUNOL RES UNIT/OXFORD OX1 3RE//ENGLAND/
Journal: NATURE, 1991, V353, N6346, P762-765
Language: ENGLISH Document Type: ARTICLE
Abstract: THE CD2 antigen is largely restricted to cells of the T-lymphocyte lineage and has been established as an important adhesion molecule in interactions between human T lymphocytes and accessory cells 1. In the adhesion reaction, CD2 on T cells binds to LFA-3 on other cells, with binding through domain 1 of CD2 (ref. 2). CD2 can also be a target for the delivery of mitogenic signals to T lymphocytes cultured with combinations of anti-CD2 antibodies 3,4. Two predictions that are contradictory have been made for the structure of CD2 domain 1. One suggests an immunoglobulin (Ig) fold, on the basis of sequence patterns conserved in the Ig-superfamily (IgSF) 5, whilst the other proposes a pattern of alternating alpha-helices and beta-strands, on the basis of secondary structure predictions 6. Thus CD2 domain 1 is an important test case for the validity of IgSF assignments based on sequence patterns. We report here the expression of domain 1 of rat CD2 in an Escherichia coli expression system and have determined a low-resolution solution structure by NMR spectroscopy.

1/7/65
11142816 Genuine Article#: GK254 Number of References: 39
Title: FINE MAPPING OF CANINE PARVOVIRUS B-CELL EPITOPES
Author(s): DETURISO JAL; CORTES E; RANZ A; GARCIA J; SANZ A; VELA C; CASAL JI
Corporate Source: INMUNOL & GENET APLICADA SA,HERMANOS GARCIA NOBLEJAS 41-2/E-28037 MADRID//SPAIN/; INMUNOL & GENET APLICADA SA,HERMANOS GARCIA NOBLEJAS 41-2/E-28037 MADRID//SPAIN/
Journal: JOURNAL OF GENERAL VIROLOGY, 1991, V72, OCT, P2445-2456
Language: ENGLISH Document Type: ARTICLE
Abstract: In this report we describe the topological mapping of neutralizing domains of canine parvovirus (CPV). We obtained 11 CPV-specific monoclonal antibodies (MAbs), six of which are neutralizing. The reactivities were as determined by ELISA and Western blot (immunoblot) analysis. VP2, the most abundant protein of the CPV

capsid, seemed to contain all the neutralization sites. Also, an almost full-length genomic clone of CPV was constructed in the bacterial plasmid pUC18 to enable expression of CPV proteins. All the neutralizing MAbs recognized recombinant VP2 when it was expressed as a free protein in Escherichia coli but not when expressed as a fusion protein with glutathione-S-transferase. When two large fragments containing about 85% and 67% of the C terminus of VP2 were expressed, no neutralization sites were detected. When fusion proteins containing the N terminus were expressed, two linear determinants were mapped, one between residues 1 to 10 of VP2, and the other between amino acids 11 and 23. The peptide 11 GQPAVRNERATGS 23, recognized by MAb 3C9, was synthesized chemically and checked for immunogenicity, not being able to induce neutralizing activity. Although the antibody response in rabbits to all the fusion proteins was uniformly high, the anti-CPV response was very variable. Protein from pCPVEx11, which contains a T cell epitope (peptide PKIFINLAKKKKAG) present in the VP1-specific region as well as the B cell epitopes, seemed to be the most effective in inducing virus neutralization.

1/7/66
11128788 Genuine Article#: GK060 Number of References: 52
Title: MUTATIONS IN THE SMALL SUBUNIT OF RIBULOSEBISPHOSPHATE CARBOXYLASE AFFECT SUBUNIT BINDING AND CATALYSIS
Author(s): PAUL K; MORELL MK; ANDREWS TJ
Corporate Source: AUSTRALIAN NATL UNIV,RES SCH BIOL SCI,POB 475/CANBERRA/ACT 2601/AUSTRALIA/; AUSTRALIAN NATL UNIV,RES SCH BIOL SCI,POB 475/CANBERRA/ACT 2601/AUSTRALIA/
Journal: BIOCHEMISTRY, 1991, V30, N41, P10019-10026
Language: ENGLISH Document Type: ARTICLE
Abstract: Fully functional Synechococcus PCC 6301 ribulose 1,5-bisphosphate carboxylase-oxygenase (k(cat) = 11.8 s-1) was assembled in vitro following separate expression of the large- and small-subunit genes in different Escherichia coli cultures. The small subunits were expressed predominantly as monomers, in contrast to the large subunits which have been shown to be largely octameric when expressed separately [Andrews, T. J. (1988) J. Biol. Chem. 263, 12213-12219]. This separate expression system was applied to the study of mutations in the amino-terminal arm of the small subunit, which is one of the major sites of contact with the large subunit in the assembled hexadecamer. It enabled the effects of a mutation on the tightness of binding of the small subunit to the large-subunit octamer to be distinguished from the effects of the same mutation on catalysis carried out by the assembled complex when fully saturated with mutant small subunits. This important distinction cannot be made when both subunits are expressed together in the same cell. Substitutions of conserved amino acid residues at positions 14 (Ala, Val, Gly, or Asp instead of Thr) and 17 (Cys instead of Tyr), which make important contacts with conserved large-subunit residues, were introduced by site-directed mutagenesis. All mutant small subunits were able to bind to large subunits and form active enzymes. A potential intersubunit hydrogen bond involving the Thr-14 hydroxyl group is shown to be unimportant. However, the binding of Gly-14, Asp-14, and Cys-17 mutant small subunits was weaker, and the resultant mutant enzymes had reduced catalytic rates compared to the wild type. All mutant enzymes had similar substrate affinities to the wild-type enzyme, except for the Gly-14 mutant enzyme, which had a 5-fold reduction in K(M)(ribulose-P2). Apparently, disruptions of intersubunit interactions at this highly conserved contact site have rather limited consequences.

1/7/67
11121983 Genuine Article#: GJ643 Number of References: 19
Title: BINDING OF GENERAL TRANSCRIPTION FACTOR TFIIB TO AN ACIDIC ACTIVATING REGION
Author(s): LIN YS; HA I; MALDONADO E; REINBERG D; GREEN MR
Corporate Source: UNIV MASSACHUSETTS,MED CTR,PROGRAM MOLEC MED,373 PLANTAT ST/WORCESTER//MA/01605; UNIV MED & DENT NEW JERSEY,ROBERT WOOD JOHNSON MED SCH,DEPT BIOCHEM/PISCATAWAY//NJ/08854
Journal: NATURE, 1991, V353, N6344, P569-571
Language: ENGLISH Document Type: ARTICLE
Abstract: A CENTRAL issue in eukaryotic transcriptional regulation is the mechanism by which promoter-specific transcription factors (activators) stimulate transcription. Two lines of evidence indicate that the general transcription factor TFIIB is a pivotal component in the mechanism by which an acidic activator functions. First, during assembly of the preinitiation complex TFIIB binding is a rate-limiting step enhanced by an acidic activator 1. Second, the TFIIB activity in a HeLa cell nuclear extract is specifically retained on a column containing an acidic activating region 1. But because our previous study monitored only TFIIB activity, it remains possible that the interaction between TFIIB and the acidic activating region is mediated through additional proteins, for example, those designated as adaptors 2, coactivators 3 or mediators 4,5. A complementary clone encoding TFIIB has recently been isolated and shown to encode a polypeptide of relative molecular mass 35,000 (ref. 6). Here we report that TFIIB expressed in and purified from Escherichia coli (recombinant TFIIB) binds directly to the potent acidic activating region of the herpes simplex virus-1 VP16 protein.

1/7/68
11121866 Genuine Article#: GH805 Number of References: 39
Title: MOUSE ERK-1 GENE-PRODUCT IS A SERINE THREONINE PROTEIN-KINASE THAT HAS THE POTENTIAL TO PHOSPHORYLATE TYROSINE
Author(s): CREWS CM; ALESSANDRINI AA; ERIKSON RL
Corporate Source: HARVARD UNIV,DEPT CELLULAR & DEV BIOL,16 DIVIN AVE/CAMBRIDGE//MA/02138
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N19, P8845-8849
Language: ENGLISH Document Type: ARTICLE
Abstract: Bacterial expression of mouse gene Erk-1 yielded an active kinase with the same substrate specificity shown for ERK1 protein purified from rat cells. Although rat gene ERK1 is believed to encode a serine/threonine kinase based on sequence data and known ERK1 substrate phosphorylation sites, bacterially-produced mouse Erk-1 (bt-Erk-1) autophosphorylated on tyrosine in addition to serine and threonine residues. The bt-Erk-1 protein also had the capacity to reactivate the ribosomal protein S6 kinase (S6KII). Furthermore, treatment of bt-Erk-1 with either serine/threonine-specific phosphatase 2A or tyrosine-specific phosphatase 1B significantly decreased its kinase activity. These findings predict that autophosphorylation may play an important role in Erk-1/ERK1 regulation.

1/7/69
11121133 Genuine Article#: GJ320 Number of References: 60
Title: THE SIGNAL RECOGNITION PARTICLE IN SACCHAROMYCES-CEREVISIAE
Author(s): HANN BC; WALTER P
Corporate Source: UNIV CALIF SAN FRANCISCO,SCH MED,DEPT BIOCHEM &BIOPHYS/SAN FRANCISCO//CA/94143

Journal: CELL, 1991, V67, N1, P131-144
Language: ENGLISH Document Type: ARTICLE
Abstract: We have identified the Saccharomyces cerevisiae homolog of the signal recognition particle (SRP) and characterized its function in vivo. S. cerevisiae SRP is a 16S particle that includes a homolog of the signal sequence-binding protein subunit of SRP (SRP54p) and a small cytoplasmic RNA (scR1). Surprisingly, the genes encoding scR1 and SRP54p are not essential for growth, though SRP-deficient cells grow poorly, suggesting that SRP function can be partially bypassed in vivo. Protein translocation across the ER membrane is impaired in SRP-deficient cells, indicating that yeast SRP, like its mammalian counterpart, functions in this process. Unexpectedly, the degree of the translocation defect varies for different proteins. The ability of some proteins to be efficiently targeted in SRP-deficient cells may explain why previous genetic and biochemical analyses in yeast and bacteria did not reveal components of the SRP-dependent protein targeting pathway.

1/7/70
11117656 Genuine Article#: GJ109 Number of References: 38
Title: INTERLEUKIN-10 (IL-10) AND VIRAL-IL-10 STRONGLY REDUCE ANTIGEN-SPECIFIC HUMAN T-CELL PROLIFERATION BY DIMINISHING THE ANTIGEN-PRESENTING CAPACITY OF MONOCYTES VIA DOWN-REGULATION OF CLASS-II MAJOR HISTOCOMPATIBILITY COMPLEX EXPRESSION
Author(s): MALEFYT RD; HAANEN J; SPITS H; RONCAROLO MG; TEVELDE A; FIGDOR C ; JOHNSON K; KASTELEIN R; YSSEL H; DEVRIES JE
Corporate Source: DNAX RES INST MOLEC & CELLULAR BIOL INC,DEPT HUMAN IMMUNOL,901 CALIF AVE/PALO ALTO//CA/94304; DNAX RES INST MOLEC & CELLULAR BIOL INC,DEPT HUMAN IMMUNOL,901 CALIF AVE/PALO ALTO//CA/94304; NETHERLANDS KANKER INST,DIV IMMUNOL/1066 CX AMSTERDAM//NETHERLANDS/
Journal: JOURNAL OF EXPERIMENTAL MEDICINE, 1991, V174, N4, P915-924
Language: ENGLISH Document Type: ARTICLE
Abstract: Interleukin 10 (IL-10) and viral IL-10 (v-IL-10) strongly reduced antigen-specific proliferation of human T cells and CD4+ T cells clones when monocytes were used as antigen-presenting cells. In contrast, IL-10 and v-IL-10 did not affect the proliferative responses to antigens presented by autologous Epstein-Barr virus-lymphoblastoid cell line (EBV-LCL). Inhibition of antigen-specific T cell responses was associated with downregulation of constitutive, as well as interferon gamma-or IL-4-induced, class II MHC expression on monocytes by IL-10 and v-IL-10, resulting in the reduction in antigen-presenting capacity of these cells. In contrast, IL-10 and v-IL-10 had no effect on class II major histocompatibility complex (MHC) expression on EBV-LCL. The reduced antigen-presenting capacity of monocytes correlated with a decreased capacity to mobilize intracellular Ca2+ in the responder T cell clones. The diminished antigen-presenting capacities of monocytes were not due to inhibitory effects of IL-10 and v-IL-10 on antigen processing, since the proliferative T cell responses to antigenic peptides, which did not require processing, were equally well inhibited. Futhermore, the inhibitory effects of IL-10 and v-IL-10 on antigen-specific proliferative T cell responses could not be neutralized by exogenous IL-2 or IL-4. Although IL-10 and v-IL-10 suppressed IL-1-alpha, IL-1-beta, tumor necrosis factor alpha (TNF-alpha), and IL-6 production by monocytes, it was excluded that these cytokines played a role in antigen-specific T cell proliferation, since normal antigen-specific responses were observed in the presence of neutralizing anti-IL-1, -IL-6, and -TNF-alpha mAbs. Furthermore, addition of saturating concentrations of IL-1-alpha, IL-1-beta, IL-6,

and TNF-alpha to the cultures had no effect on the reduced proliferative T cell responses in the presence of IL-10, or v-IL-10. Collectively, our data indicate that IL-10 and v-IL-10 can completely prevent antigen-specific T cell proliferation by inhibition of the antigen-presenting capacity of monocytes through downregulation of class II MHC antigens on monocytes.

1/7/71
11113558 Genuine Article#: GH254 Number of References: 52
Title: HTLV-1 ENVELOPE SEQUENCES FROM BRAZIL, THE CARIBBEAN, AND ROMANIA - CLUSTERING OF SEQUENCES ACCORDING TO GEOGRAPHIC ORIGIN AND VARIABILITY IN AN ANTIBODY EPITOPE
Author(s): SCHULZ TF; CALABRO ML; HOAD JG; CARRINGTON CVF; MATUTES E; CATOVSKY D; WEISS RA
Corporate Source: INST CANC RES,FULHAM RD/LONDON SW3 6JB//ENGLAND/
Journal: VIROLOGY, 1991, V184, N2, P483-491
Language: ENGLISH Document Type: ARTICLE

1/7/72
11109909 Genuine Article#: GH250 Number of References: 39
Title: CD44 SPLICE VARIANTS CONFER METASTATIC BEHAVIOR IN RATS - HOMOLOGOUS SEQUENCES ARE EXPRESSED IN HUMAN TUMOR-CELL LINES
Author(s): HOFMANN M; RUBY W; ZOLLER M; TOLG C; PONTA H; HERRLICH P; GUNTHERT U
Corporate Source: UNIV KARLSRUHE,KERNFORSCHUNGSZENTRUM,INST GENET& TOXIKOL/D-7500 KARLSRUHE 1//FED REP GER/; UNIV KARLSRUHE,INST GENET/D-7500 KARLSRUHE 1//FED REP GER/; GERMAN CANC RES CTR,INST RADIOL & PATHOPHYSIOL/D-6900 HEIDELBERG 1//FED REP GER/
Journal: CANCER RESEARCH, 1991, V51, N19, P5292-5297
Language: ENGLISH Document Type: ARTICLE
Abstract: One of several splice variants of CD44 expressed in metastasizing cell lines of rat tumors has been shown to confer metastatic potential to the non-metastatic variant of a rat pancreatic carcinoma line (U. Gunthert et al., Cell, 65: 13-24, 1991). The variant-specific rat CD44 sequences were used to detect RNA expression in human cell lines: in carcinoma lines from lung, breast and colon; and in keratinocyte lines.

By polymerase chain reaction amplification, complementary DNAs encoding human homologues were isolated and sequenced. The largest splice variant has been found in a large cell lung carcinoma line and in keratinocyte cell lines. It carries at least 5 additional domains (exons) encoding a total of 338 amino acids in the membrane-proximal extracellular region of the standard CD44. Various alternative splice products have been detected in other human tumor cell lines. The distribution of CD44 splice variants is consistent with the speculation that they fulfill functions in only a few restricted differentiation pathways and that in tumor cells these pathways have been reactivated.

1/7/73
11105359 Genuine Article#: GH249 Number of References: 32
Title: ANKYRIN BINDS TO THE 15TH REPETITIVE UNIT OF ERYTHROID AND NONERYTHROID BETA-SPECTRIN
Author(s): KENNEDY SP; WARREN SL; FORGET BG; MORROW JS
Corporate Source: YALE UNIV,SCH MED,DEPT PATHOL/NEW HAVEN//CT/06510; YALE UNIV,SCH MED,DEPT MED/NEW HAVEN//CT/06510
Journal: JOURNAL OF CELL BIOLOGY, 1991, V115, N1, P267-277
Language: ENGLISH Document Type: ARTICLE

Abstract: Ankyrin mediates the attachment of spectrin to transmembrane integral proteins in both erythroid and nonerythroid cells by binding to the beta-subunit of spectrin. Previous studies using enzymatic digestion, 2-nitro-5-thiocyanobenzoic acid cleavage, and rotary shadowing techniques have placed the spectrin-ankyrin binding site in the COOH-terminal third of beta-spectrin, but the precise site is not known. We have used a glutathione S-transferase prokaryotic expression system to prepare recombinant erythroid and nonerythroid beta-spectrin from cDNA encoding approximately the carboxy-terminal half of these proteins. Recombinant spectrin competed on an equimolar basis with I-125-labeled native spectrin for binding to erythrocyte membrane vesicles (IOVs), and also bound ankyrin in vitro as measured by sedimentation velocity experiments. Although full length beta-spectrin could inhibit all spectrin binding to IOVs, recombinant beta-spectrin encompassing the complete ankyrin binding domain but lacking the amino-terminal half of the molecule failed to inhibit about 25 % of the binding capacity of the IOVs, suggesting that the ankyrin-independent spectrin membrane binding site must lie in the amino-terminal half of beta-spectrin. A nested set of shortened recombinants was generated by nuclease digestion of beta-spectrin cDNAs from ankyrin binding constructs. These defined the ankyrin binding domain as encompassing the 15th repeat unit in both erythroid and nonerythroid beta-spectrin, amino acid residues 1,768-1,898 in erythroid beta-spectrin. The ankyrin binding repeat unit is atypical in that it lacks the conserved tryptophan at position 45 (1,811) within the repeat and contains a nonhomologous 43 residue segment in the terminal third of the repeat. It also appears that the first 30 residues of this repeat, which are highly conserved between the erythroid and nonerythroid beta-spectrins, are critical for ankyrin binding activity. We hypothesize that ankyrin binds directly to the nonhomologous segment in the 15th repeat unit of both erythroid and nonerythroid beta-spectrin, but that this sequence must be presented in the context of a properly folded spectrin "repeat unit" structure. Future studies will identify which residues within the repeat unit are essential for activity, and which residues determine the specificity of various spectrins for different forms of ankyrin.

1/7/74
11090767 Genuine Article#: GF615 Number of References: 44
Title: DIFFERENT MECHANISMS REGULATE MUSCLE-SPECIFIC ACHR GAMMA-SUBUNIT AND EPSILON-SUBUNIT GENE-EXPRESSION
Author(s): NUMBERGER M; DURR I; KUES W; KOENEN M; WITZEMANN V
Corporate Source: MAX PLANCK INST MED RES,ZELLPHYSIOL ABT/D-6900 HEIDELBERG 1//FED REP GER/
Journal: EMBO JOURNAL, 1991, V10, N10, P2957-2964
Language: ENGLISH Document Type: ARTICLE
Abstract: Five different subunits, alpha, beta, gamma, delta and epsilon, constitute the acetylcholine receptors from mammalian skeletal muscle. Their corresponding mRNA levels are regulated differentially. In particular, mRNAs encoding the gamma- and epsilon-subunits, which specify two AChR isoforms, show a reciprocal behaviour during synapse formation and maturation. We have isolated 5′ flanking sequences of the gamma- and epsilon-subunit genes that confer muscle-specific expression upon transient transfection of primary cultures of rat muscle cells. The gamma-subunit gene fragment contains two adjacent CANNTG sequence motifs that are essential for muscle-specific transcriptional activity suggesting transactivation by helix - loop - helix proteins. The epsilon-subunit gene fragment carries only a single CANNTG consensus

motif which is not required for expression in transfected muscle cells. This sequence motif is, however, necessary to repress transcriptional activity in non-muscle cells and thus may control the muscle-specific expression of the epsilon-subunit gene. The results suggest that CANNTG motifs together with their 3′ and 5′ flanking nucleotides provide binding sites for both activating as well as repressing trans-acting factors. These elements could thus contribute to the muscle-specific expression of AChR subunit genes.

1/7/75
11089957 Genuine Article#: GF445 Number of References: 21
Title: RSR1 AND RAP1 GTPASES ARE ACTIVATED BY THE SAME GTPASE-ACTIVATING PROTEIN AND REQUIRE THREONINE-65 FOR THEIR ACTIVATION
Author(s): HOLDEN JL; NUREKAMAL MSA; FABRI L; NICE E; HAMMACHER A; MARUTA H
Corporate Source: LUDWIG INST CANC RES,MELBOURNE TUMOR BIOL BRANCH/MELBOURNE/VIC 3050/AUSTRALIA/; LUDWIG INST CANC RES,MELBOURNE TUMOR BIOL BRANCH/MELBOURNE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N26, P16992-16995
Language: ENGLISH Document Type: NOTE
Abstract: The Rsr1 protein of Saccharomyces cerevisiae has been shown to be essential for bud site selection (Bender, A., and Pringle, J. (1989) Proc. Natl. Acad. Sci. U.S.A. 86, 9976-9980). This protein of 272 amino acids shares approximately 50% sequence identity with both Ras and Rap GTPases. However, neither GTP binding nor GTPase activity of the Rsr1 protein has been reported. The Rsr1 protein shares with human Rap1 GTPases the four specific motifs, i.e. Gly12, residues 32-40, Ala-59, and residues 64-70, that are required for GAP3-dependent activation of the Rap1 GTPases. In this paper we demonstrate that the intrinsic GTPase activity of the Rsr1 protein is stimulated by GAP3 purified from bovine brain cytosol. The Rsr1 GTPase is not activated by either GAP1 or GAP2 which are specific for the Ras and Rho GTPases, respectively. Thus, it appears that the Rsr1 GTPase is a new member of the Rap1 GTPase family. Replacement of Gly-12 by Val in the Rsr1 GTPase completely abolishes the GAP3-dependent activation. The chimeric GTPases, Ras(1-60)/Rsr1(61-168) and Rsr1(1-65)/Ras(66-189), are activated by GAP3 but not by GAP1. Replacement of Thr-65 by Ser in the latter chimeric GTPase completely abolishes the GAP3-dependent activation, indicating that Thr-65 is required for distinguishing GAP3 from GAP1. We have previously shown that Gln-61 and Ser-65 are sufficient to determine the GAP1 specificity. Replacement of Thr-35 by Ala in the common effector domain (residues 32-40) of the chimeric Ras/Rsr1 GTPases completely abolishes GAP3-dependent activation.

1/7/76
11076651 Genuine Article#: GE779 Number of References: 35
Title: CLONING AND EXPRESSION OF ANTIGENIC EPITOPES OF THE HUMAN 68-KDA (U1) RIBONUCLEOPROTEIN ANTIGEN IN ESCHERICHIA-COLI
Author(s): FRORATH B; SCANARINI M; NETTER HJ; ABNEY CC; LIEDVOGEL B; LAKOMEK HJ; NORTHEMANN W
Corporate Source: ELIAS ENTWICKLUNGSLABOR,DEPT MOLEC BIOL,OBERE HARDTSTR 18/D-7800 FREIBURG//FED REP GER/; ELIAS ENTWICKLUNGSLABOR,DEPT MOLEC BIOL,OBERE HARDTSTR 18/D-7800 FREIBURG//FED REP GER/; MAX PLANCK INST BIOCHEM/D-8033 MARTINSRIED//FEDREP GER/; KLINIKUM MINDEN/MINDEN//FED REP GER/
Journal: BIOTECHNIQUES, 1991, V11, N3, P364&
Language: ENGLISH Document Type: ARTICLE
Abstract: Autoantibodies directed against the 68-kDa (U1) ribonucleoprotein antigen are mainly found in sera of patients with mixed connective

tissue disease. The corresponding cDNA was fragmented into four regions coding for the major antigenic epitopes A′, B′, C′ and D′. All the epitopes were subcloned and expressed as fusion proteins with the glutathione S-transferase in Escherichia coli using the novel expression system pGEX that allows very high yields of recombinant proteins after a single-step purification. The sera of patients with the autoimmune disease were analyzed for the expressed recombinant proteins by an immunoblotting technique. All positive sera showed a patient-specific behavior and could be divided into four groups regarding recognition of the four antigenic epitopes of the 68-kDa (U1) ribonucleoprotein antigen. The epitope B′ was reactive to all patient sera positively tested and classified as the marker antigenic epitope for the mixed connective tissue disease.

1/7/77
11073591 Genuine Article#: GE357 Number of References: 27
Title: CLONING AND CHARACTERIZATION OF AN IMMUNODOMINANT MAJOR SURFACE-ANTIGEN OF ECHINOCOCCUS-MULTILOCULARIS
Author(s): FROSCH PM; FROSCH M; PFISTER T; SCHAAD V; BITTERSUERMANN D
Corporate Source: MED HSCH HANNOVER,INST MED MIKROBIOL/D-3000 HANNOVER 61//FED REP GER/; UNIV HOHENHEIM,INST PARASITOL/D-7000 STUTTGART 70//FED REP GER/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1991, V48, N2, P121-130
Language: ENGLISH Document Type: ARTICLE
Abstract: A lambda-gt11 cDNA expression library from mRNA of Echinococcus multilocularis protoscolices has been constructed in Escherichia coli Y1090. Immunoscreening with pooled sera obtained from patients suffering from E. multilocularis disease revealed 5 reactive clones. By partial DNA sequence comparison all clones proved to encode the same gene. The complete cDNA sequence of the clone pEM10 with the largest insert of 2.2 kb was determined and an open reading frame of 1.7 kb could be described. The derived amino acid sequence shares 42.6% identity with human microvillar cytovillin found in the membranes of placenta and carcinoma tissues. The coding region of the cDNA of pEM10 was amplified by polymerase chain reaction (PCR) and cloned in frame into expression vector pGEX-3X. Immunoblot analysis revealed the expression of a recombinant antigen of 65 kDa and a protein with the same molecular weight was also found in the lysate of E. multilocularis protoscolices. In contrast, the protein was absent from hydatid fluid or larvae of Echinococcus granulosus. By means of immunofluorescence studies this immunodominant antigen could be located in the germinal layer of brood capsules and in the tegument of E. multilocularis protoscolices. The fusion protein was purified and used for diagnostic purposes in immunoblot. The diagnostic value of this antigen is discussed.

1/7/78
11069974 Genuine Article#: GD920 Number of References: 17
Title: ESTIMATION OF AMOUNTS OF ANTI-LA(SS-B) ANTIBODY DIRECTED AGAINST IMMUNODOMINANT EPITOPES OF THE LA(SS-B) AUTOANTIGEN
Author(s): GORDON TP; GREER M; REYNOLDS P; GUIDOLIN A; MCNEILAGE LJ
Corporate Source: FLINDERS UNIV,MED CTR,DEPT CLIN IMMUNOL/BEDFORDPK/SA 5042/AUSTRALIA/
Journal: CLINICAL AND EXPERIMENTAL IMMUNOLOGY, 1991, V85, N3, P402-406
Language: ENGLISH Document Type: ARTICLE
Abstract: The contribution of circulating anti-La(SS-B) antibody to the hypergammaglobulinaemia seen in primary Sjogren's syndrome is unknown. In this study levels of anti-La(SS-B) antibody directed against three

immunodominant epitopes of the anti-La(SS-B) autoantigen were measured by ELISA in 84 anti-La(SS-B) + sera using purified recombinant protein and antibody affinity-purified against the three anti-La(SS-B) fusion proteins. There was marked variation in the amounts of IgG anti-La(SS-B) antibody detected, with levels ranging from 0.02 mg/ml to 11 mg/ml. The anti-La(SS-B) levels were > 1 mg/ml in 61% of patients; in 18% of sera the anti-La(SS-B) level constituted 10% or more of the total serum IgG. However, other patients were seen with marked hypergammaglobulinaemia and low anti-La(SS-B) concentrations. These results support an antigen-driven mechanism for the anti-La(SS-B) response and suggest that anti-La(SS-B) antibody production is regulated independently of other immunoglobulins.

1/7/79
11069963 Genuine Article#: GD859 Number of References: 37
Title: SECRETION AND MOVEMENT OF WINGLESS PROTEIN IN THE EPIDERMIS OF THE DROSOPHILA EMBRYO
Author(s): GONZALEZ F; SWALES L; BEJSOVEC A; SKAER H; ARIAS AM
Corporate Source: UNIV CAMBRIDGE,DEPT ZOOL,AFRC,MOLEC SIGNALLING LAB/CAMBRIDGE CB2 3EJ//ENGLAND/; UNIV CAMBRIDGE,DEPT ZOOL,AFRC,MOLEC SIGNALLING LAB/CAMBRIDGE CB2 3EJ//ENGLAND/
Journal: MECHANISMS OF DEVELOPMENT, 1991, V35, N1, P43-54
Language: ENGLISH Document Type: ARTICLE
Abstract: The segment polarity gene wingless encodes a cysteine rich protein which is essential for pattern formation in Drosophila. Using polyclonal antibodies against the product of the wingless gene, we demonstrate that this protein is secreted in the embryo and that it is taken up by neighbouring cells. The protein can be found two or three cell diameters away from the cells in which it is synthesized. We discuss the possible mechanisms which are responsible for this spatial distribution and its regulation during embryogenesis.

1/7/80
11067479 Genuine Article#: GE731 Number of References: 19
Title: UNRESTRICTED EXPRESSION OF THE DROSOPHILA GENE PATCHED ALLOWS A NORMAL SEGMENT POLARITY
Author(s): SAMPEDRO J; GUERRERO I
Corporate Source: MRC,MOLEC BIOL LAB,HILLS RD/CAMBRIDGE CB2 2QH//ENGLAND/; UNIV AUTONOMA MADRID,CSIC,CTR BIOL MOLEC/E-28049 MADRID//SPAIN/
Journal: NATURE, 1991, V353, N6340, P187-190
Language: ENGLISH Document Type: ARTICLE
Abstract: IN the Drosophila embryo, mutations in the segment polarity gene patched (ptc) cause the replacement of the middle region of each segment by a mirror-image duplication of the remaining structures, including the parasegmental border 1-3. This gene, which encodes a transmembrane protein, is initially expressed in a generalized way at blastoderm, but later stops being transcribed in cells expressing the engrailed gene, and even later in cells in the middle of the parasegment 2-4. The genes engrailed (en) and wingless (wg) are also segment-polarity genes, and they are expressed in adjacent stripes flanking the parasegment borders in the embryo 5; in ptc mutants wg expression extends anteriorly and an ectopic stripe of en expression is induced 6,7. The suggestion has been made that ptc must be transcribed in a specific subset of cells to prevent en expression anterior to the wg-expressing stripe 4. Here we report that unrestricted expression of ptc from a heat-shock promoter has no adverse effect on development of Drosophila embryos. The heat-shock construct can also rescue ptc mutants, restoring wg expression to its normal narrow stripe. The

ectopic en stripe fails to appear, but the normal one remains unaffected. The results imply that, despite its localized requirement, the restricted expression of ptc does not itself allocate positional information.

1/7/81
11067475 Genuine Article#: GE731 Number of References: 35
Title: ISOLATION OF THE HUMAN CDK2 GENE THAT ENCODES THE CYCLIN-A-ASSOCIATED AND ADENOVIRUS-E1A-ASSOCIATED P-33 KINASE
Author(s): TSAI LH; HARLOW E; MEYERSON M
Corporate Source: MASSACHUSETTS GEN HOSP,CTR CANC,BLDG 149,13TH ST/BOSTON//MA/02129
Journal: NATURE, 1991, V353, N6340, P174-177
Language: ENGLISH Document Type: ARTICLE
Abstract: CYCLINS are regulatory subunits which associate with kinases to form complexes that control many of the important steps in cell-cycle progression. The best characterized of the cyclin-containing complexes is the association of cyclin B with the p34cdc2 kinase. The p34cdc2/cyclin B complex is required for the G2 to M transition (see refs 1-4 for review), but the physiological role of other cyclin complexes is unclear. Human cyclin A binds independently to two kinases, associating with either p34cdc2 or a related protein, p33 (refs 5-7). In adenovirus-transformed cells, the viral E1A oncoprotein seems to associate with p33/cyclin A but not with p34cdc2/cyclin A (B. Faha, M.M., L-H.T. and E.H., manuscript submitted). To isolate the gene for p33, we have cloned several novel human cdc2-related genes. The protein product of one of these genes, cdk2 (cyclin-dependent kinase 2), shares 65% sequence identity with p34cdc2 (ref. 8) and 89% identity with the Xenopus Eg-1 gene product 9. Immunochemical characterization and partial proteolytic mapping show that the cdk2 gene product is the cyclin A-associated p33. Immunoprecipitations of the p33cdk2 protein suggest that it can act as a protein kinase in vitro. As p33cdk2 is bound to cyclin A and is targeted by the viral E1A protein, we suggest that the p33cdk2/cyclin A complex has a unique role in cell-cycle regulation of vertebrate cells.

1/7/82
11066200 Genuine Article#: GD576 Number of References: 23
Title: CONVERSION OF THE HUMAN BLOOD-GROUP H-ANTIGEN TO A-ANTIGEN INVITRO
Author(s): NAN Y; BOETTCHER B
Corporate Source: UNIV NEWCASTLE,DEPT BIOL SCI/NEWCASTLE/NSW 2308/AUSTRALIA/
Journal: IMMUNOLOGY AND CELL BIOLOGY, 1991, V69, APR, P111-118
Language: ENGLISH Document Type: ARTICLE
Abstract: A-transferase (N-acetylgalactosaminyl transferase) was purified from human group A plasma using Sepharose 4B affinity chromatography. Human anti-A antibodies were purified from human serum by adsorption to an immunosorbent column and heat elution in order to detect the A antigen. Conditions appropriate for the development of the A antigen on O red cells were examined and several buffer systems were found to be equally effective. Expression of the developed A antigen was found to be similar to that on group A red cells, indicating that the system in vitro has similar activity to the system in vivo. The H antigen from human saliva was coupled to Sepharose 4B or adsorbed to a nitrocellulose membrane. The A antigen was able to be developed on these materials by the action of group A-transferase.

The procedures enabled the identification in vitro of

sugar-transferase activities which can be useful in studies within the A,B,H antigen system or other carbohydrate antigen system.

1/7/83
11060905 Genuine Article#: GD635 Number of References: 38
Title: STUDIES ON THE MECHANISM OF FUNCTIONAL COOPERATIVITY BETWEEN PROGESTERONE AND ESTROGEN-RECEPTORS
Author(s): BRADSHAW MS; TSAI SY; LENG XH; DOBSON ADW; CONNEELY OM; OMALLEY BW; TSAI MJ
Corporate Source: BAYLOR COLL MED,DEPT CELL BIOL/HOUSTON//TX/77030; BAYLOR COLL MED,DEPT CELL BIOL/HOUSTON//TX/77030
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N25, P16684-16690
Language: ENGLISH Document Type: ARTICLE
Abstract: Steroid response elements (SREs) cooperate with many different cis-acting elements including NF-1 sites, CACCC boxes, and other SREs to induce target gene expression (Schule, R., Muller, M., Otsuka-Murakami, H., and Renkawitz, R. (1988) Nature 332, 87-90; Strahle, U., Schmid, W., and Schutz, G. (1988) EMBO J. 7, 3389-3395). Induction of gene expression can be additive or synergistic with respect to the level of activation by either transactivators. Two mechanisms have been proposed for how synergism occurs: 1) cooperative binding of transcriptional activators to DNA or 2) simultaneous interaction of individually bound activators with a common target protein. We have shown previously that cooperative binding of receptors is important for synergism between two progesterone response elements (PREs). Here we showed that an estrogen response element (ERE) and a PRE can also functionally cooperate and this synergism between an ERE and a PRE is not contributed by cooperative DNA binding. Furthermore, we have demonstrated that the activation domains of the progesterone receptor (PR) (C1Act) are required for synergism between two PREs and sufficient for confirming cooperative binding. However these two activation domains of PR are not sufficient for synergism between an ERE and a PRE. Additional regions within the NH2-terminal and COOH-terminal domains are also required for synergistic interaction between two heterologous SREs.

1/7/84
11056709 Genuine Article#: GD020 Number of References: 37
Title: CLONING AND SEQUENCING OF THE GENES-CODING FOR THE 10-KDA AND 60-KDA HEAT-SHOCK PROTEINS FROM PSEUDOMONAS-AERUGINOSA AND MAPPING OF A SPECIES-SPECIFIC EPITOPE
Author(s): SIPOS A; KLOCKE M; FROSCH M
Corporate Source: MED HSCH HANNOVER,INST MED MIKROBIOL/D-3000 HANNOVER 61//FED REP GER/; MED HSCH HANNOVER,INST MED MIKROBIOL/D-3000 HANNOVER 61//FED REP GER/
Journal: INFECTION AND IMMUNITY, 1991, V59, N9, P3219-3226
Language: ENGLISH Document Type: ARTICLE
Abstract: A genomic library of Pseudomonas aeruginosa DNA was screened with a monoclonal antibody (MAb 2528) specific for the P. aeruginosa 60-kDa heat shock protein. A positive clone, pAS-1, was isolated. The gene coding for P. aeruginosa chaperonin (hsp60) was localized to a 2-kb EcoRI fragment subcloned in pAS-2. A sequence analysis of pAS-2 and parts of pAS-1 identified two open reading frames that encoded proteins with calculated molecular masses of 10 and 57 kDa. In amino acid sequence comparison studies the sequences of these proteins, which were designated GroES and GroEL, exhibited up to 78% homology with known prokarytic sequences of 10- and 60-kDa heat shock proteins (hsp10 and hsp60). In order to map the epitope recognized by MAb 2528, a series

of GroEL nested carboxy-terminal deletion clones were tested with MAb 2528. We identified the clone with the shortest insertion that was still recognized by MAb 2528 and the clone with the largest insertion that was not recognized by MAb 2528. The 3′ ends of the insertions were determined by sequencing and were found to delimit a region that encoded 25 amino acid residues. Synthetic oligonucleotides that coded for peptides possibly resembling the epitope within this region were ligated into expression vector pGEX-3X, and fusion proteins expressed by these clones were tested for reactivity with MAb 2528. By using this method we determined that the decapeptide QADIEARVLQ (positions 339 to 348 on GroEL) was responsible for the binding of P. aeruginosa-specific MAb 2528.

1/7/85
11055710 Genuine Article#: GC824 Number of References: 41
Title: SCHISTOSOMA-MANSONI TROPOMYOSIN - PRODUCTION AND PURIFICATION OF THE RECOMBINANT PROTEIN AND STUDIES ON ITS IMMUNODIAGNOSTIC POTENTIAL
Author(s): XU H; REKOSH DM; ANDREWS W; HIGASHI GI; NICHOLSON L; LOVERDE PT
Corporate Source: SUNY BUFFALO,SCH MED,DEPT MICROBIOL,203 SHERMANHALL/BUFFALO//NY/14214; SUNY BUFFALO,SCH MED,DEPT MICROBIOL,203 SHERMANHALL/BUFFALO//NY/14214; SUNY BUFFALO,SCH MED,DEPT PATHOL/BUFFALO//NY/14214; SUNY BUFFALO,SCH MED,DEPT BIOCHEM/BUFFALO//NY/14214; UNIV MICHIGAN,SCH PUBL HLTH,DEPT EPIDEMIOL/ANN ARBOR//MI/49109
Journal: AMERICAN JOURNAL OF TROPICAL MEDICINE AND HYGIENE, 1991, V45, N1 , P121-131
Language: ENGLISH Document Type: ARTICLE
Abstract: A cDNA that encodes Schistosoma mansoni tropomyosin, except for 10 amino acids at the amino terminus, has been cloned into a pOTSNCO plasmid vector. Induced expression resulted in a constant level of recombinant protein production. The recombinant S. mansoni tropomyosin was purified from preparative SDS-PAGE gel and by a combination of 20% ammonium sulfate fractionation and fast protein liquid chromatography-ion exchange chromatography. The purified recombinant S. mansoni tropomyosin was tested as an immunodiagnostic reagent in Western blot and enzyme-linked immunosorbent assays. Sera from individual patients with chronic S. mansoni infection, but not S. haematobium, S. japonicum, parasitic infections other than schistosomiasis, and without infection reacted with the recombinant tropomyosin. The species specificity of S. mansoni tropomyosin suggests that further study of its potential as an immunodiagnostic reagent is warranted.

1/7/86
11053899 Genuine Article#: GC992 Number of References: 30
Title: CLONING OF A CELLULAR FACTOR, INTERLEUKIN BINDING-FACTOR, THAT BINDS TO NFAT-LIKE MOTIFS IN THE HUMAN-IMMUNODEFICIENCY-VIRUS LONG TERMINAL REPEAT
Author(s): LI C; LAI CF; SIGMAN DS; GAYNOR RB
Corporate Source: UNIV TEXAS,HLTH SCI CTR,SW MED SCH,DEPT INTERNAL MED,DIV MOLEC VIROL,5323 HARRY HINES BLVD/DALLAS//TX/75235; INST MOLEC BIOL/LOS ANGELES//CA/90024; UNIV CALIF LOS ANGELES,SCH MED,DEPT MED,DIV HEMATOL ONCOL/LOS ANGELES//CA/90024; UNIV CALIF LOS ANGELES,SCH MED,DEPT BIOL CHEM/LOS ANGELES//CA/90024
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N17, P7739-7743
Language: ENGLISH Document Type: ARTICLE
Abstract: Human immunodeficiency virus (HIV) gene expression is regulated

by both general transcription factors and factors induced by activation of T lymphocytes such as NF-kappa-B and the nuclear factor of activated T cells (NFAT). Within the HIV long terminal repeat (LTR), two purine-rich domains between nucleotides -283 and -195 have homology to a regulatory region found in the interleukin 2 promoter, which binds NFAT and other cellular factors. In the HIV LTR, this region has been demonstrated to have both positive and negative regulatory effects on HIV gene expression. In an attempt to clone genes encoding cellular factors that bind to these NFAT-like elements in the HIV LTR, we used lambda-gt11 expression cloning with oligonucleotides corresponding to these binding motifs. A ubiquitously expressed cDNA encoding a 60-kDa protein, which we termed interleukin binding factor (ILF), binds specifically to these purine-rich motifs in the HIV LTR. This factor also binds to similar purine-rich motifs in the interleukin 2 promoter, though with lower affinity than to HIV LTR sequences. Sequence analysis reveals that the DNA binding domain of ILF has strong homology to the recently described fork head DNA binding domain found in the Drosophila homeotic protein fork head and a family of hepatocyte nuclear factors, HNF-3. Other domains found in ILF include a nucleotide binding site, an N-glycosylation motif, a signal for ubiquitin-mediated degradation, and a potential nuclear localization signal. These results describe a DNA binding protein that may be involved in both positive and negative regulation of important viral and cellular promoter elements.

1/7/87
11048395 Genuine Article#: GC745 Number of References: 43
Title: CALCINEURIN IS A COMMON TARGET OF CYCLOPHILIN-CYCLOSPORINE-A AND FKBP-FK506 COMPLEXES
Author(s): LIU J; FARMER JD; LANE WS; FRIEDMAN J; WEISSMAN I; SCHREIBER SL
Corporate Source: HARVARD UNIV,DEPT CHEM/CAMBRIDGE//MA/02138; STANFORD UNIV,MED CTR,SCH MED,HOWARD HUGHES MEDINST,DEPT PATHOL/STANFORD//CA/94305; HARVARD UNIV,MICROCHEM FACIL/CAMBRIDGE//MA/02138; STANFORD UNIV,MED CTR,SCH MED,HOWARD HUGHES MEDINST,DEPT DEV BIOL/STANFORD//CA/94305
Journal: CELL, 1991, V66, N4, P807-815
Language: ENGLISH Document Type: ARTICLE
Abstract: Although the immediate receptors (immunophilins) of the immunosuppressants cyclosporin A (CsA) and FK506 are distinct, their similar mechanisms of inhibition of cell signaling suggest that their associated immunophilin complexes interact with a common target. We report here that the complexes cyclophilin-CsA and FKBP-FK506 (but not cyclophilin, FKBP, FKBP-rapamycin, or FKBP-506BD) competitively bind to and inhibit the Ca2+- and calmodulin-dependent phosphatase calcineurin, although the binding and inhibition of calcineurin do not require calmodulin. These results suggest that calcineurin is involved in a common step associated with T cell receptor and IgE receptor signaling pathways and that cyclophilin and FKBP mediate the actions of CsA and FK506, respectively, by forming drug-dependent complexes with and altering the activity of calcineurin-calmodulin.

1/7/88
11048394 Genuine Article#: GC745 Number of References: 35
Title: 2 CYTOPLASMIC CANDIDATES FOR IMMUNOPHILIN ACTION ARE REVEALED BY AFFINITY FOR A NEW CYCLOPHILIN - ONE IN THE PRESENCE AND ONE IN THE ABSENCE OF CSA
Author(s): FRIEDMAN J; WEISSMAN I
Corporate Source: STANFORD UNIV,MED CTR,SCH MED,HOWARD HUGHES MEDINST,DEPT PATHOL/STANFORD//CA/94305; STANFORD UNIV,MED CTR,SCH MED,HOWARD HUGHES

MEDINST,DEPT DEV BIOL/STANFORD//CA/94305
Journal: CELL, 1991, V66, N4, P799-806
Language: ENGLISH Document Type: ARTICLE
Abstract: We report the cloning and characterization of a new binding protein for the immunosuppressive drug cyclosporin A (CsA). This new cyclophilin, cyclophilin C (cyp C), shows extensive homology with all previously identified cyclophilins. Cyp C mRNA is expressed in a restricted subset of tissues relative to cyclophilins A and B, but is present in those tissues reported to be most affected by CsA therapy. A cyp C fusion protein has peptidyl-prolyl isomerase activity, and CsA inhibits this activity. Using the cyp C fusion protein as an affinity ligand to probe cellular extracts, we find that the cyp C fusion protein binds specifically to a 77 kd protein in the absence of CsA, while in the presence of CsA it instead binds specifically to a 55 kd protein. We propose that the p77 is involved in cyp C native function and that the p55 is involved in signal transduction events blocked by treatment with immunosuppressive levels of CsA.

1/7/89
11043896 Genuine Article#: GB991 Number of References: 28
Title: FURTHER CHARACTERIZATION OF THE SCHISTOSOMA-JAPONICUM PROTEIN SJ23, A TARGET ANTIGEN OF AN IMMUNODIAGNOSTIC MONOCLONAL-ANTIBODY
Author(s): DAVERN KM; WRIGHT MD; HERRMANN VR; MITCHELL GF
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1991, V48, N1, P67-76
Language: ENGLISH Document Type: ARTICLE
Abstract: Sj23, the 23-kDa target antigen in Schistosoma japonicum adult worms of the hybridoma monoclonal antibody (mAb) I-134, has been identified and cloned from cDNA libraries. mAb 1-134 has been successfully used in immunodiagnostic assays to detect S. japonicum infection in Philippine patients. Sequence analysis has shown that Sj23 is the homologue, with 84% amino acid identity, of Sm23, a 23-kDa molecule from S. mansoni worms previously described from our laboratory. The domain structures of Sj23 and Sm23 are strikingly similar to the human membrane proteins ME491, CD37, CD53 and TAPA-1, which may suggest a functional role for the schistosome molecules in cellular proliferation.

1/7/90
11042017 Genuine Article#: GB273 Number of References: 20
Title: EXPRESSION OF THE P80 REGION OF BOVINE VIRAL DIARRHEA VIRUS AND IDENTIFICATION OF SPECIFIC ANTIBODIES TO THIS RECOMBINANT PROTEIN IN BOVINE SERA
Author(s): KWANG J; BOLIN S; LITTLEDIKE ET; DUBOVI EJ; DONIS RO
Corporate Source: USDA ARS,MEAT ANIM RES CTR/CLAY CTR//NE/68933; USDA ARS,NATL ANIM DIS CTR/AMES//IA/50010; CORNELL UNIV,NEW YORK STATE COLL VET MED,DIAGNOST LAB/ITHACA//NY/14853; UNIV NEBRASKA,DEPT VET SCI/LINCOLN//NE/68583
Journal: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, 1991, V178, N3, P1326-1334
Language: ENGLISH Document Type: ARTICLE

1/7/91
11040415 Genuine Article#: GB977 Number of References: 43
Title: REPLICATION OF PLASMID R6K ORIGIN GAMMA INVITRO - DEPENDENCE ON DUAL INITIATOR PROTEINS AND INHIBITION BY TRANSCRIPTION

Author(s): MACALLISTER TW; KELLEY WL; MIRON A; STENZEL TT; BASTIA D
Corporate Source: DUKE UNIV,MED CTR,DEPT MICROBIOL & IMMUNOL/DURHAM//NC/27710; DUKE UNIV,MED CTR,DEPT MICROBIOL & IMMUNOL/DURHAM//NC/27710
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N24, P16056-16062
Language: ENGLISH Document Type: ARTICLE
Abstract: We have developed a more efficient in vitro replication system for the plasmid R6K with the objective of dissecting the mechanism of activation of replication origins at a distance. Using this in vitro system we have shown that the activation of replication origin-gamma of R6K is absolutely dependent on two exogenously added initiator proteins: namely the host-encoded DnaA and the plasmid-encoded Pi proteins. Replication was inhibited by novobiocin, suggesting a requirement for DNA gyrase. Surprisingly, rifampicin stimulated in vitro replication significantly, and this stimulation was manifested in the quantitative enhancement of replication without any noticeable qualitative change in the reaction products. This result suggests that transcription at or near the gamma-origin keeps it repressed. Replication intermediates that were allowed to accumulate by dideoxynucleoside triphosphate incorporation were analyzed both by restriction enzyme digestion and by electron microscopy, and both sets of analyses revealed initiation from the gamma-origin resulting in theta-type replication intermediates. Further development of this system should help us to understand how DNA-protein interaction at the gamma-origin/enhancer activates the distal origins alpha and beta.

1/7/92
11031556 Genuine Article#: GB018 Number of References: 64
Title: IDENTIFICATION OF T-CELL AND B-CELL EPITOPES OF THE E7 PROTEIN OF HUMAN PAPILLOMAVIRUS TYPE-16
Author(s): COMERFORD SA; MCCANCE DJ; DOUGAN G; TITE JP
Corporate Source: UNIV ROCHESTER,DEPT MICROBIOL & IMMUNOL/ROCHESTER//NY/14642; UNIV ROCHESTER,DEPT MICROBIOL & IMMUNOL/ROCHESTER//NY/14642; WELLCOME RES LABS,DEPT MOLEC BIOL/BECKENHAM BR33BS/KENT/ENGLAND/
Journal: JOURNAL OF VIROLOGY, 1991, V65, N9, P4681-4690
Language: ENGLISH Document Type: ARTICLE
Abstract: There is strong evidence implicating human papillomavirus type 16 (HPV16) in the genesis of human genital cancer. Viral DNA has been identified in invasive carcinoma of the uterine cervix and in cell lines derived from cervical carcinomas. These sequences are actively transcribed, and translation products corresponding to the early (E)-region genes have been identified. The most abundant viral protein is the E7 protein, which has been shown to possess transforming activity for both established and primary cells. In addition, it has been shown to bind to a cellular tumor suppressor, the retinoblastoma gene product (pRb-105). In view of these properties, we have undertaken the immunological analysis of this protein and have identified four T-cell epitopes and three B-cell epitopes by using a series of overlapping peptides spanning the entire HPV16 E7 sequence. Two of the B-cell epitopes were recognized by antisera from mice with three different murine (H-2) haplotypes (k, d, and s) immunized with two different E7 fusion proteins and from Fischer rats seeded with baby rat kidney cells transformed by HPV16 E7 and ras. A third B-cell epitope was recognized by antisera from CBA mice seeded with HPV16 E7-expressing L cells. Two regions of the protein contain common B- and T-cell epitopes, one of which appears to be particularly immunodominant.

1/7/93
11028488 Genuine Article#: GA643 Number of References: 27
Title: THE POTATO LEAFROLL LUTEOVIRUS 17K PROTEIN IS A SINGLE-STRANDED NUCLEIC ACID-BINDING PROTEIN
Author(s): TACKE E; PRUFER D; SCHMITZ J; ROHDE W
Corporate Source: MAX PLANCK INST ZUCHTUNGSFORSCH,CARL VON LINNE WEG/D-5000 COLOGNE 30//FED REP GER/
Journal: JOURNAL OF GENERAL VIROLOGY, 1991, V72, AUG, P2035-2038
Language: ENGLISH Document Type: ARTICLE
Abstract: The potato leafroll luteovirus protein of M(r) 17K (pr17), which is encoded by an open reading frame on the 3′ half of the viral genome, was expressed by using bacterial expression vector systems. Fusion proteins were obtained for the full-length viral protein as well as its N-terminal acidic (GST/pr17N) and C-proximal (GST/pr17C) basic domains and used in nucleic acid-binding studies. Filter-bound as well as soluble pr17 bound to single-stranded RNA or DNA. The binding domain was shown to reside in the basic C-proximal part of the polypeptide, whereas the N-terminal acidic domain did not show any affinity for nucleic acid. These biochemical properties of pr17 together with its structural features suggest a regulatory role for this protein during virus replication.

1/7/94
11027470 Genuine Article#: GB097 Number of References: 43
Title: CHARACTERIZATION OF CDNA CLONES ENCODING A NOVEL CALCIUM-ACTIVATED NEUTRAL PROTEINASE FROM SCHISTOSOMA-MANSONI
Author(s): ANDRESEN K; TOM TD; STRAND M
Corporate Source: JOHNS HOPKINS UNIV,SCH MED,DEPT PHARMACOL & MOLEC SCI,725 N WOLFE ST/BALTIMORE//MD/21205; JOHNS HOPKINS UNIV,SCH MED,DEPT PHARMACOL & MOLEC SCI,725 N WOLFE ST/BALTIMORE//MD/21205
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N23, P15085-15090
Language: ENGLISH Document Type: ARTICLE
Abstract: To identify and characterize Schistosoma mansoni proteins that are recognized by infected hosts, we have used a pool of sera from infected humans to screen cDNA libraries constructed from poly(A)+ mRNA of adult S. mansoni. The deduced amino acid sequences of the three isolated clones showed a high degree of similarity to the large subunit of calcium-activated neutral proteinase (CANP) from humans and chicken. These overlapping clones, which include a nearly full-length clone with an open reading frame of 758 amino acid residues, together encode the entire large subunit of CANP. The deduced sequence of this S. mansoni protein can be divided into four domains (I-IV) that include the two domains characteristic of other large subunits of CANP: a thiol-protease domain (II) and a calcium-binding domain (IV) containing EF hand motifs. However, the schistosome protein is unique in having only three EF hand motifs in the calcium-binding domain and in having an additional EF hand motif that is shared between domains II and III. We have shown that these EF hand motifs are capable of binding Ca-45(2+). Furthermore, the large subunit in S. mansoni contains an NH2-terminal sequence of 28 residues that is absent from the mammalian CANPs and has a high degree of similarity to the presumed receptor binding sequence of colicin Ia and Ib.

1/7/95
11021759 Genuine Article#: GA438 Number of References: 17
Title: SEQUENCE AND EXPRESSION IN ESCHERICHIA-COLI OF A MYCOPLASMA-HOMINIS GENE ENCODING ELONGATION FACTOR-TU
Author(s): LUNEBERG E; KAMLA V; HADDING U; FROSCH M

Corporate Source: MED HSCH HANNOVER,INST MED MIKROBIOL,KONSTANTY GUTSCHOW STR/D-3000 HANNOVER 61//FED REP GER/; MED HSCH HANNOVER,INST MED MIKROBIOL,KONSTANTY GUTSCHOW STR/D-3000 HANNOVER 61//FED REP GER/; UNIV DUSSELDORF,INST MED MIKROBIOL & VIROL/D-4000 DUSSELDORF 1//FED REP GER/
Journal: GENE, 1991, V102, N1, P123-127
Language: ENGLISH Document Type: NOTE
Abstract: We describe the molecular cloning and the complete nucleotide (nt) sequence of a Mycoplasma hominis gene common to a broad range of Mycoplasma species, as defined by hybridization analysis with the cloned gene. Production of M. hominis protein in Escherichia coli was assayed by use of a monoclonal antibody. The nt sequence analysis revealed a 1194-bp open reading frame that could encode a 43 516-Da protein. Computer-aided sequence comparison indicated that the gene codes for elongation factor Tu.

1/7/96
11021718 Genuine Article#: GA340 Number of References: 43
Title: CLONAL ANALYSIS OF DIFFERENTIAL LYMPHOKINE PRODUCTION IN PEPTIDE AND SUPERANTIGEN INDUCED T-CELL ANERGY
Author(s): OHEHIR RE; YSSEL H; VERMA S; DEVRIES JE; SPITS H; LAMB JR
Corporate Source: IMPERIAL COLL SCI TECHNOL & MED,ST MARYS HOSP,SCH MED,DEPT IMMUNOL,NORFOLK PL/LONDON W2 1PG//ENGLAND/; DNAX RES INST MOLEC & CELLULAR BIOL INC/PALO ALTO//CA/94304
Journal: INTERNATIONAL IMMUNOLOGY, 1991, V3, N8, P819-826
Language: ENGLISH Document Type: ARTICLE
Abstract: A failure of T lymphocytes to produce interleukin 2 (IL-2) on restimulation may, in part, account for the specific unresponsiveness that accompanies incomplete activation. The evidence to support this has been derived predominantly from the investigation of the molecular basis of anergy in murine type 1 T cells. In this study, the effects of different tolerogenic signals delivered by specific peptide or Staphylococcus aureus enterotoxin on the ability of antigen-specific human T cells to produce lymphokines, both in the induction phase and in established antigen-specific non-responsiveness, have been examined. Although T cell proliferation was decreased by supraoptimal concentrations of specific peptide in the presence or absence of antigen presenting cells, IL-2, IL-4, and interferon gamma (IFN-gamma) synthesis were comparable to that of activated T cells. The different tolerogenic signals, all capable of inhibiting proliferation, had selective effects on the secretion of these lymphokines during the induction phase of unresponsiveness. Restimulation of anergic T cells with an antigenic challenge failed to induce lymphokine production, with the exception of allergen-reactive T cells that secreted IFN-gamma. This latter observation is relevant to the desensitization of specific responsiveness in allergic disease.

1/7/97
11007311 Genuine Article#: FZ472 Number of References: 37
Title: THE EMBRYONIC EXPRESSION PATTERNS OF ZFH-1 AND ZFH-2, 2 DROSOPHILA GENES ENCODING NOVEL ZINC-FINGER HOMEODOMAIN PROTEINS
Author(s): LAI ZC; FORTINI ME; RUBIN GM
Corporate Source: UNIV CALIF BERKELEY,DEPT MOLEC & CELL BIOL/BERKELEY//CA/94720; UNIV CALIF BERKELEY,DEPT MOLEC & CELL BIOL/BERKELEY//CA/94720; UNIV CALIF BERKELEY,HOWARD HUGHES MED INST/BERKELEY//CA/94720
Journal: MECHANISMS OF DEVELOPMENT, 1991, V34, N2-3, P123-134
Language: ENGLISH Document Type: ARTICLE
Abstract: The zfh-1 and zfh-2 genes of D. melanogaster encode novel

proteins containing both homeodomain and C2-H-2 zinc-finger DNA-binding motifs. Antisera against these proteins were used to investigate their expression patterns during embryonic development. The zfh-1 gene is expressed in the mesoderm of early embryos and in a number of mesodermally-derived structures of late embryos, including the dorsal vessel, support cells of the gonads, and segment-specific arrays of adult muscle precursors. In addition, zfh-1 is expressed in the majority of identified motor neurons of the developing CNS. The mesodermal zfh-1 expression requires the products of the twist and snail genes. The zfh-2 gene displays a more limited expression pattern, largely restricted to the CNS of late embryos. Ubiquitous zfh-1 expression in transgenic flies bearing an hsp70-zfh-1 construct has specific developmental consequences, including embryonic CNS defects as well as adult eye and bristle abnormalities. The expression patterns of zfh-1 and zfh-2 suggest that both genes may be involved in Drosophila neurogenesis and that zfh-1 may have additional functions in mesoderm development.

1/7/98
11005678 Genuine Article#: GA226 Number of References: 27
Title: AMINO-TERMINAL DOMAINS OF C-MYC AND N-MYC PROTEINS MEDIATE BINDING TO THE RETINOBLASTOMA GENE-PRODUCT
Author(s): RUSTGI AK; DYSON N; BERNARDS R
Corporate Source: MASSACHUSETTS GEN HOSP,CTR CANC,DIV MOLEC GENET,149 13TH ST/BOSTON//MA/02150; MASSACHUSETTS GEN HOSP,CTR CANC,DIV MOLEC ONCOL/BOSTON//MA/02150; MASSACHUSETTS GEN HOSP,GASTROINTESTINAL UNIT/BOSTON//MA/02150; HARVARD UNIV,SCH MED/BOSTON//MA/02115
Journal: NATURE, 1991, V352, N6335, P541-544
Language: ENGLISH Document Type: ARTICLE
Abstract: THE proteins encoded by the myc gene family are involved in the control of cell proliferation and differentiation, and aberrant expression of myc proteins has been implicated in the genesis of a variety of neoplasms 1. In the carboxyl terminus, myc proteins have two domains that encode a basic domain/helix-loop-helix and a leucine zipper motif, respectively. These motifs are involved both in DNA binding and in protein dimerization 2-5. In addition, myc protein family members share several regions of highly conserved amino acids in their amino termini that are essential for transformation 6,7. We report here that an N-terminal domain present in both the c-myc and N-myc proteins mediates binding to the retinoblastoma gene product, pRb. We show that the human papilloma virus E7 protein competes with c-myc for binding to pRb, indicating that these proteins share overlapping binding sites on pRb. Furthermore, a mutant Rb protein from a human tumour cell line that carried a 35-amino-acid deletion in its C terminus failed to bind to c-myc. Our results suggest that c-myc and pRb cooperate through direct binding to control cell proliferation.

1/7/99
11003358 Genuine Article#: FZ566 Number of References: 57
Title: CLONING AND EXPRESSION OF MURINE INTERLEUKIN-1 RECEPTOR ANTAGONIST IN MACROPHAGES STIMULATED BY COLONY-STIMULATING FACTOR-I
Author(s): MATSUSHIME H; ROUSSEL MF; MATSUSHIMA K; HISHINUMA A; SHERR CJ
Corporate Source: ST JUDE CHILDRENS HOSP,HOWARD HUGHES MED INST,DEPT TUMOR CELL BIOL,332 N LAUDERDALE/MEMPHIS//TN/38105; ST JUDE CHILDRENS HOSP,HOWARD HUGHES MED INST,DEPT TUMOR CELL BIOL,332 N LAUDERDALE/MEMPHIS//TN/38105; UNIV TENNESSEE,CTR HLTH SCI,COLL MED,DEPT BIOCHEM/MEMPHIS//TN/38163; NCI,FREDERICK CANC RES FACIL,IMMUNOREGULAT LAB/FREDERICK//MD/21701

Journal: BLOOD, 1991, V78, N3, P616-623
Language: ENGLISH Document Type: ARTICLE

1/7/100
11002319 Genuine Article#: FY987 Number of References: 8
Title: NONIMMUNOLOGICAL PRECIPITATION OF PROTEIN-DNA COMPLEXES USING GLUTATHIONE-S-TRANSFERASE FUSION PROTEINS
Author(s): FAINSOD A; MARGALIT Y; HAFFNER R; GRUENBAUM Y
Corporate Source: HEBREW UNIV JERUSALEM,HADASSAH MED SCH,DEPT CELLULAR BIOCHEM/IL-91010 JERUSALEM//ISRAEL/; HEBREW UNIV JERUSALEM,DEPT GENET/IL-91904 JERUSALEM//ISRAEL/
Journal: NUCLEIC ACIDS RESEARCH, 1991, V19, N14, P4005
Language: ENGLISH Document Type: NOTE

1/7/101
10997849 Genuine Article#: FY331 Number of References: 20
Title: TOXOPLASMACIDAL ACTIVITY OF MACROPHAGES ACTIVATED BY RECOMBINANT MAJOR SURFACE-ANTIGEN (P-30) OF TOXOPLASMA-GONDII
Author(s): MAKIOKA A; KOBAYASHI A
Corporate Source: FLINDERS UNIV,MED CTR,DEPT MICROBIOL & INFECT DIS/BEDFORD PK/SA 5042/AUSTRALIA/; JIKEI UNIV,DEPT PARASITOL,MINATO KU/TOKYO 105//JAPAN/
Journal: INFECTION AND IMMUNITY, 1991, V59, N8, P2851-2852
Language: ENGLISH Document Type: NOTE
Abstract: Recombinant major surface antigen (P30), which was produced as a glutathione S-transferase (EC 2.5.1.18) fusion protein of Toxoplasma gondii, was found to be able to activate macrophages to kill T. gondii in vitro. The macrophage activation was due to P30 in the fusion protein, not to glutathione S-transferase.

1/7/102
10997828 Genuine Article#: FY331 Number of References: 35
Title: GENETIC AND IMMUNOLOGICAL ANALYSIS OF MYCOBACTERIUM-TUBERCULOSIS FIBRONECTIN-BINDING PROTEINS
Author(s): ABOUZEID C; GARBE T; LATHIGRA R; WIKER HG; HARBOE M; ROOK GAW; YOUNG DB
Corporate Source: UNIV COLL & MIDDLESEX SCH MED,DEPT MED MICROBIOL,RIDINGHOUSE ST/LONDON W1P 7PN//ENGLAND/; HAMMERSMITH HOSP,ROYAL POSTGRAD MED SCH,MRC,TB & RELATED INFECT UNIT/LONDON W12 0HS//ENGLAND/; UNIV OSLO,INST IMMUNOL & RHEUMATOL/N-0172 OSLO 1//NORWAY/
Journal: INFECTION AND IMMUNITY, 1991, V59, N8, P2712-2718
Language: ENGLISH Document Type: ARTICLE
Abstract: Recombinant phage clones, TB1 and TB2, were selected from a Mycobacterium tuberculosis lambda-gt11 DNA expression library by screening with a polyclonal antiserum raised against the antigen 85 complex of Mycobacterium bovis BCG. Analysis of recombinant DNA inserts and expressed fusion proteins showed that two new genes had been isolated. The product of clone TB2 was identified as a member of the 30/31-kDa antigen 85 complex. Restriction enzyme analysis showed that this gene differs from previously cloned members of this antigen complex, with detailed serological analysis indicating that it may encode the 85C component. Antisera raised against the expressed product of clone TB1 recognized a 55-kDa protein in M. tuberculosis extracts. The 55-kDa protein also has fibronectin-binding activity and, like the 30/31-kDa family, is a prominent target of the antibody response in patients with mycobacterial disease. Although the clones were selected by using the same antiserum, detailed analysis by

serology and by DNA hybridization showed that they represent two quite distinct types of fibronectin-binding activities expressed by M. tuberculosis. Further analysis of the fibronectin-binding antigens of M. tuberculosis may provide important insights into their role in mediating the interaction with the host immune system.

1/7/103
10991043 Genuine Article#: FW598 Number of References: 0
(NO REFS KEYED)
Title: MANUFACTURING NEW-GENERATION PROTEINS .1. THE TECHNOLOGY
Author(s): HAMMOND PM; ATKINSON T; SHERWOOD RF; SCAWEN MD
Corporate Source: PUBL HLTH LAB SERV,CTR APPL MICROBIOL & RES,DIVBIOTECHNOL/SALISBURY SP4 0JG/WILTS/ENGLAND/; PUBL HLTH LAB SERV,PROT DEV GRP/SALISBURY SP4 0JG/WILTS/ENGLAND/; PUBL HLTH LAB SERV,PROT BIOCHEM GRP/SALISBURY SP4 0JG/WILTS/ENGLAND/
Journal: BIOPHARM-THE TECHNOLOGY & BUSINESS OF BIOPHARMACEUTICALS, 1991, V4 , N4, P16&
Language: ENGLISH Document Type: ARTICLE
Abstract: Genetic engineering techniques reached commercial capacity during the 1980s, leading to the manufacture of a large number of recombinant protein products. Technological developments also enabled protein chemists to design protein molecules with characteristics that aid purification. This month, we introduce the technology used to manufacture new-generation proteins. Part II addresses process design and quality management.

1/7/104
10990450 Genuine Article#: FY712 Number of References: 52
Title: EXPRESSION OF A DOMINANT NEGATIVE MUTANT OF THE FGF RECEPTOR DISRUPTS MESODERM FORMATION IN XENOPUS EMBRYOS
Author(s): AMAYA E; MUSCI TJ; KIRSCHNER MW
Corporate Source: UNIV CALIF SAN FRANCISCO,DEPT BIOCHEM & BIOPHYS/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT OBSTET GYNECOL & REPROD SCI/SAN FRANCISCO//CA/94143
Journal: CELL, 1991, V66, N2, P257-270
Language: ENGLISH Document Type: ARTICLE
Abstract: Peptide growth factors may play a role in patterning of the early embryo, particularly in the induction of mesoderm. We have explored the role of fibroblast growth factor (FGF) in early Xenopus development by expressing a dominant negative mutant form of the FGF receptor. Using a functional assay in frog oocytes, we found that a truncated form of the receptor effectively abolished wild-type receptor function. Explants from embryos expressing this dominant negative mutant failed to induce mesoderm in response to FGF. In whole embryos the mutant receptor caused specific defects in gastrulation and in posterior development, and overexpression of a wild-type receptor could rescue these developmental defects. These results demonstrate that the FGF signaling pathway plays an important role in early embryogenesis, particularly in the formation of the posterior and lateral mesoderm.

1/7/105
10989385 Genuine Article#: FY027 Number of References: 33
Title: RECOMBINANT HUMAN PIM-1 PROTEIN EXHIBITS SERINE THREONINE KINASE-ACTIVITY
Author(s): HOOVER D; FRIEDMANN M; REEVES R; MAGNUSON NS
Corporate Source: WASHINGTON STATE UNIV,DEPT MICROBIOL/PULLMAN//WA/99164; WASHINGTON STATE UNIV,DEPT MICROBIOL/PULLMAN//WA/99164; WASHINGTON STATE UNIV,PROGRAM GENET & CELL BIOL/PULLMAN//WA/99164; WASHINGTON

STATE UNIV,DEPT BIOCHEM & BIOPHYS/PULLMAN//WA/99164
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N21, P14018-14023
Language: ENGLISH Document Type: ARTICLE
Abstract: The protein predicted by the sequence of the human pim-1 proto-oncogene shares extensive homology with known serine/threonine protein kinases, and yet the human Pim-1 enzyme has previously been reported to exhibit protein tyrosine kinase activity both in vitro and in vivo. Recently a new class of protein kinases has been identified which exhibits both protein-serine/threonine and protein-tyrosine kinase activities. We therefore investigated the possibility that the human Pim-1 kinase likewise possesses such bifunctional enzymatic phosphorylating activities. A full-length human pim-1 cDNA was subcloned into the bacterial vector pGEX-2T and the Pim-1 protein expressed as a fusion product with bacterial glutathione S-transferase (GST). The hybrid GST-Pim-1 fusion protein was affinity purified on a glutathione-Sepharose column prior to treatment with thrombin for cleavage of the Pim-1 protein from the transferase. Pim-1 was purified and the identity of recombinant protein confirmed by amino-terminal sequence analysis. Pim-1 was tested for kinase activity with a variety of proteins and peptides known to be substrates for either mammalian protein-serine/threonine or protein-tyrosine kinases and was found to phosphorylate serine/threonine residues exclusively in vitro. Both the Pim-1-GST fusion protein and the isolated Pim-1 protein exhibited only serine/threonine phosphorylating activity under all in vitro conditions tested. Pim-1 phosphorylated purified mammalian histone H1 with a K(m) of approximately 51-mu-m. Additionally, Pim-1 exhibited low levels of serine/threonine autophosphorylating activity. These observations place the human Pim-1 in a small select group of cytoplasmic transforming oncogenic kinases, including the protein kinase C, the Raf/Mil, and the Mos subfamilies, exhibiting serine/threonine phosphorylating activity.

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10989276 Genuine Article#: FX723 Number of References: 34
Title: CYCLIC AMPLIFICATION AND SELECTION OF TARGETS (CASTING) FOR THE MYOGENIN CONSENSUS BINDING-SITE
Author(s): WRIGHT WE; BINDER M; FUNK W
Corporate Source: UNIV TEXAS,HLTH SCI CTR,SW MED SCH,DEPT CELL BIOL & NEUROSCI,5323 HARRY HINES BLVD/DALLAS//TX/75235
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1991, V11, N8, P4104-4110
Language: ENGLISH Document Type: ARTICLE
Abstract: The consensus binding site for the muscle regulatory factor myogenin was determined from an unbiased set of degenerate oligonucleotides using CASTing (cyclic amplification and selection of targets). Stretches of totally random sequence flanked by polymerase chain reaction priming sequences were mixed with purified myogenin or myotube nuclear extracts, DNA-protein complexes were immunoprecipitated with an antimyogenin antibody, and the DNA was amplified by polymerase chain reaction. Specific binding was obtained after four to six cycles of CASTing. The population of selected binding sites was then cloned, and a consensus was determined from sequencing individual isolates. Starting from a pool with 14 random bases, purified myogenin yielded a consensus binding site of AACAG[T/C]TGTT, while nuclear extracts retrieved the sequence TTGCACCTGTTNNTT from a pool containing 35 random bases. The latter sequence is consistent with that predicted from combining an E12/E47 half-site (N[not T]CAC) with the purified myogenin half-site ([T/C] TGTT). The presence of paired E boxes in many of the sequences isolated following CASTing with nuclear extracts proves that myogenin can bind cooperatively with other E-box-binding factors.

1/7/107
10975348 Genuine Article#: FX131 Number of References: 33
Title: A SINGLE PEPTIDE FROM THE MAJOR OUTER-MEMBRANE PROTEIN OF CHLAMYDIA-TRACHOMATIS ELICITS T-CELL HELP FOR THE PRODUCTION OF ANTIBODIES TO PROTECTIVE DETERMINANTS
Author(s): ALLEN JE; LOCKSLEY RM; STEPHENS RS
Corporate Source: UNIV CALIF SAN FRANCISCO,FRANCIS I PROCTOR FDN/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,FRANCIS I PROCTOR FDN/SAN FRANCISCO//CA/94143; UNIV CALIF BERKELEY,DEPT BIOMED & ENVIRONM HLTHSCI/BERKELEY//CA/94720; UNIV CALIF SAN FRANCISCO,DEPT MED/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT LAB MED/SAN FRANCISCO//CA/94143
Journal: JOURNAL OF IMMUNOLOGY, 1991, V147, N2, P674-679
Language: ENGLISH Document Type: ARTICLE
Abstract: The protective immune response to infection with Chlamydia trachomatis is associated with antibody reactivity to serovar-specific determinants on the major outer membrane protein (MOMP). Because this immunity is T cell dependent, it is essential to define those Th cell determinants that promote natural boosting of the protective antibody response. The gene for MOMP of serovar B was separated into nine overlapping fragments that represent the five C and four V regions. These fragments were expressed as fusion peptides with GST and used to identify the regions of the MOMP that contain T cell determinants recognized in BALB/c mice. We identified peptides that elicit a T cell response to Chlamydia by immunizing mice with the fusion peptides and testing the proliferative response of T cells in vitro to intact organism. For analysis of determinants seen after infection. animals were inoculated with live organism and the T cell proliferative response to each fusion peptide was measured in vitro. In contrast to proliferative analysis in which several regions of the MOMP elicited T cell responses, functional analysis demonstrated that a single fusion peptide, containing V segment three, elicited T cell help in vivo for the production of high titered antisera, specific for protective determinants on the MOMP.

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10973619 Genuine Article#: FW156 Number of References: 37
Title: THE PARIETAL-CELL AUTOANTIBODIES RECOGNIZED IN NEONATAL THYMECTOMY-INDUCED MURINE GASTRITIS ARE THE ALPHA-SUBUNIT AND BETA-SUBUNIT OF THE GASTRIC PROTON PUMP
Author(s): JONES CM; CALLAGHAN JM; GLEESON PA; MORI Y; MASUDA T; TOH BH
Corporate Source: MONASH UNIV,SCH MED,DEPT PATHOL & IMMUNOL,COMMERCIAL RD/PRAHRAN/VIC 3181/AUSTRALIA/; MONASH UNIV,SCH MED,DEPT PATHOL & IMMUNOL,COMMERCIAL RD/PRAHRAN/VIC 3181/AUSTRALIA/; KYOTO UNIV,INST IMMUNOL,DEPT IMMUNOBIOL/KYOTO 606//JAPAN/
Journal: GASTROENTEROLOGY, 1991, V101, N2, P287-294
Language: ENGLISH Document Type: ARTICLE

1/7/109
10968453 Genuine Article#: FW913 Number of References: 55
Title: BCR SEQUENCES ESSENTIAL FOR TRANSFORMATION BY THE BCR-ABL ONCOGENE BIND TO THE ABL-SH2 REGULATORY DOMAIN IN A NON-PHOSPHOTYROSINE-DEPENDENT MANNER
Author(s): PENDERGAST AM; MULLER AJ; HAVLIK MH; MARU Y; WITTE ON
Corporate Source: UNIV CALIF LOS ANGELES,DEPT MICROBIOL & MOLEC GENET/LOS ANGELES//CA/90024; UNIV CALIF LOS ANGELES,HOWARD HUGHES MED INST/LOS ANGELES//CA/90024; UNIV CALIF LOS ANGELES,INST MOLEC BIOL/LOS ANGELES//CA/90024

Journal: CELL, 1991, V66, N1, P161-171
Language: ENGLISH Document Type: ARTICLE
Abstract: BCR-ABL is a chimeric oncogene implicated in the pathogenesis of Philadelphia chromosome-positive human leukemias. BCR first exon sequences specifically activate the tyrosine kinase and transforming potential of BCR-ABL. We have tested the hypothesis that activation of BCR-ABL may involve direct interaction between BCR sequences and the tyrosine kinase regulatory domains of ABL. Full-length c-BCR as well as BCR sequences retained in BCR-ABL bind specifically to the SH2 domain of ABL. The binding domain has been localized within the first exon of BCR and consists of at least two SH2-binding sites. This domain is essential for BCR-ABL-mediated transformation. Phosphoserine/phosphothreonine but not phosphotyrosine residues on BCR are required for interaction with the ABL SH2 domain. These findings extend the range of potential SH2-protein interactions in growth control pathways and suggest a function for SH2 domains in the activation of the BCR-ABL oncogene as well as a role for BCR in cellular signaling pathways.

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10965513 Genuine Article#: FX185 Number of References: 26
Title: CLONING OF CDNAS FOR CELLULAR PROTEINS THAT BIND TO THE RETINOBLASTOMA GENE-PRODUCT
Author(s): DEFEOJONES D; HUANG PS; JONES RE; HASKELL KM; VUOCOLO GA; HANOBIK MG; HUBER HE; OLIFF A
Corporate Source: MERCK SHARP & DOHME LTD,DEPT CANC RES/W POINT//PA/19486; MERCK SHARP & DOHME LTD,DEPT CANC RES/W POINT//PA/19486
Journal: NATURE, 1991, V352, N6332, P251-254
Language: ENGLISH Document Type: ARTICLE
Abstract: THE E7 transforming protein of human papilloma virus-16 binds to the retinoblastoma gene product (pRb) 1,2 through a nine-amino-acid segment of E7 (21-29) 3-5. This segment of E7 is homologous to the pRb-binding domains of the simian virus 40 large T and adenovirus E1A transforming proteins 6-9. Each of these viral transforming proteins bind to the same region of pRb 10-11. To isolate cellular proteins that interact with this viral protein-binding domain on pRb 12,13, we used recombinant pRb to screen a human complementary DNA expression library. Two cDNAs were isolated that encode retinoblastoma binding proteins (RBP-1 and RBP-2). We report here that these RBP genes exist in separate loci and produce discrete messenger RNAs. The predicted amino-acid sequence of these genes showed no homology to known proteins, but both RBPs contain the pRb binding motif conserved between E7, large T and E1A 14. In vitro expression of the RBP cDNAs yielded proteins that specifically bound to pRb. Recombinant E7 protein, the E7 21-29 peptide and the homologous RBP-L peptide inhibited RBP-pRb binding. Mutations introduced into the putative pRb-binding segment in RBP-1 impaired its binding activity. These studies indicate that the cellular RBP-1, RBP-2 and viral E7 proteins interact with pRb through similar domains.

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10965512 Genuine Article#: FX185 Number of References: 22
Title: CYCLIN-A AND THE RETINOBLASTOMA GENE-PRODUCT COMPLEX WITH A COMMON TRANSCRIPTION FACTOR
Author(s): BANDARA LR; ADAMCZEWSKI JP; HUNT T; LATHANGUE NB
Corporate Source: NATL INST MED RES,MRC,EUKARYOT MOLEC GENET LAB,RIDGEWAY,MILL HILL/LONDON NW7 1AA//ENGLAND/; NATL INST MED RES,MRC,EUKARYOT MOLEC GENET LAB,RIDGEWAY,MILL HILL/LONDON NW7

1AA//ENGLAND/; IMPERIAL CANC RES FUND,CLARE HALL LABS/POTTERS BAR EN6 3LD/HERTS/ENGLAND/
Journal: NATURE, 1991, V352, N6332, P249-251
Language: ENGLISH Document Type: ARTICLE
Abstract: THE retinoblastoma gene (Rb) product is a negative regulator of cellular proliferation 1 an effect that could be mediated in part at the transcriptional level through its ability to complex with the sequence-specific transcription factor DRTF1 (ref. 2). This interaction is modulated by adenovirus E1a, which sequesters the Rb protein 3 and several other cellular proteins 3, including cyclin A (refs 4, 5), a molecule that undergoes cyclical accumulation and destruction during each cell cycle 6,7 and which is required for cell cycle progression 8. Cyclin A, which also complexes with DRTF1, facilitates the efficient assembly of the Rb protein into the complex. This suggests a role for cyclin A in regulating transcription and defines a transcription factor through which molecules that regulate the cell cycle in a negative fashion, such as Rb, and in a positive fashion, such as cyclin A, interact. Mutant loss-of-function Rb alleles, which occur in a variety of tumour cells, also fail to complex with E1a and large T antigen 9,10. Here we report on a naturally occurring loss-of-function Rb allele encoding a protein that fails to complex with DRTF1. This might explain how mutation in the Rb gene prevents negative growth control.

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10964122 Genuine Article#: FW761 Number of References: 23
Title: MOLECULAR MIMICRY BY TRYPANOSOMA-CRUZI - THE FL-160 EPITOPE THAT MIMICS MAMMALIAN NERVE CAN BE MAPPED TO A 12-AMINO ACID PEPTIDE
Author(s): VANVOORHIS WC; SCHLEKEWY L; LETRONG H
Corporate Source: UNIV WASHINGTON,DEPT MED,MAILSTOP SJ-10/SEATTLE//WA/98195 ; UNIV WASHINGTON,DEPT BIOCHEM/SEATTLE//WA/98195
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N14, P5993-5997
Language: ENGLISH Document Type: ARTICLE
Abstract: Antigenic mimicry by Trypanosoma cruzi antigens that share epitopes with mammalian tissues may drive autoreactive B- or T-cell clones to expand and cause autoimmune pathogenesis. We have been studying one of these antigens, Fl-160, a 160-kDa protein on the surface of T. cruzi that antigenically mimics a 48-kDa protein found in mammalian axonal and myenteric plexus cells. The Fl-160 antigen has been characterized by cloning and expression of T. cruzi DNA encoding Fl-160 in Escherichia coli. Recombinant peptides from various regions of the Fl-160 gene were expressed and used to compete with affinity-purified polyclonal anti-Fl-160 antibodies binding to nerve. Recombinant 48-amino acid peptide (48X) derived from expression of base pairs 611-761 of the DNA sequence completely inhibited anti-Fl-160 binding to nerve. Recombinant peptides expressed from DNA lacking this region did not inhibit anti-Fl-160 binding to nerve. Three peptides were synthesized to encompass the 48X peptide, a 12-amino acid peptide and two 18-amino acid peptides. The 12-amino acid peptide TPQRKTTEDRPQ (12X), corresponding to bases 615-651, completely inhibited the binding of anti-Fl-160 antibodies to nerve at a concentration of 80 ng/ml (30-mu-M). The two 18-residue peptides did not inhibit, even at 10-mu-g/ml. Thus, the epitope of Fl-160 crossreactive with nervous tissue can be mapped to a 12-amino acid peptide. Some humans with T. cruzi infection make antibodies to Fl-160 and to the 48X and 12X peptides. Control sera from uninfected persons did not react with these antigens. Anti-48X antibodies, immunoselected from human serum with 48X peptide, bind to human nerve axons. This demonstrates that some

individuals infected with T. cruzi make antibodies to the Fl-160 epitope crossreactive with nervous tissues.

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10958805 Genuine Article#: FV215 Number of References: 53
Title: FUNCTIONS OF THE MAJOR TYROSINE PHOSPHORYLATION SITE OF THE PDGF RECEPTOR BETA-SUBUNIT
Author(s): KAZLAUSKAS A; DURDEN DL; COOPER JA
Corporate Source: NATL JEWISH CTR,DEPT PEDIAT,1400 JACKSON ST/DENVER//CO/80206; FRED HUTCHINSON CANC RES CTR/SEATTLE//WA/98104
Journal: CELL REGULATION, 1991, V2, N6, P413-425
Language: ENGLISH Document Type: ARTICLE
Abstract: Two tyrosine phosphorylation sites in the human platelet-derived growth factor receptor (PDGFR) beta-subunit have been mapped previously to tyrosine (Y)751, in the kinase insert, and Y857, in the kinase domain. Y857 is the major site of tyrosine phosphorylation in PDGF-stimulated cells. To evaluate the importance of these phosphorylations, we have characterized the wild-type (WT) and mutant human PDGF receptor beta-subunits in dog kidney epithelial cells. Replacement of either Y751 or Y857 with phenylalanine (F) reduced PDGF-stimulated DNA synthesis to approximately 50% of the WT level. A mutant receptor with both tyrosines mutated was unable to initiate DNA synthesis, as was a kinase-inactive mutant receptor. Transmodulation of the epidermal growth factor receptor required Y857 but not Y751. We also tested the effects of phosphorylation site mutations on PDGF-stimulated receptor kinase activity. PDGF-induced tyrosine phosphorylation of two cellular proteins, phospholipase C gamma-1 (PLC-gamma-1) and the GTPase activating protein of Ras (GAP), was assayed in epithelial cells expressing each of the mutant receptors. Tyrosine phosphorylation of GAP and PLC-gamma-1 was reduced markedly by the F857 mutation but not significantly by the F751 mutation. Reduced kinase activity of F857 receptors was also evident in vitro. Immunoprecipitated WT receptors showed a two- to fourfold increase in specific kinase activity if immunoprecipitated from PDGF-stimulated cells. The F751 receptors showed a similar increase in activity, but F857 receptors did not. Our data suggest that phosphorylation of Y857 may be important for stimulation of kinase activity of the receptors and for downstream actions such as epidermal growth factor receptor transmodulation and mitogenesis.

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10945885 Genuine Article#: FU897 Number of References: 63
Title: IMMUNOLOGICAL CROSS-REACTIVITY BETWEEN A CLONED ANTIGEN OF ONCHOCERCA-VOLVULUS AND A COMPONENT OF THE RETINAL-PIGMENT EPITHELIUM
Author(s): BRAUN G; MCKECHNIE NM; CONNOR V; GILBERT CE; ENGELBRECHT F; WHITWORTH JA; TAYLOR DW
Corporate Source: UNIV CAMBRIDGE,DEPT PATHOL,TENNIS COURT RD/CAMBRIDGE CB2 1QP//ENGLAND/; MRC LABS/BO//SIERRA LEONE/; INST OPHTHALMOL,DEPT PREVENT OPHTHALMOL/LONDON EC1V 9EJ//ENGLAND/
Journal: JOURNAL OF EXPERIMENTAL MEDICINE, 1991, V174, N1, P169-177
Language: ENGLISH Document Type: ARTICLE
Abstract: Onchocerciasis (river blindness) is a major blinding disease in Africa, Central America, and South America. Loss of vision can be due to corneal change, optic atrophy, or chorioretinal disease. It has been suggested that autoimmunological reactions resulting from crossreactivity between parasite antigens and components of eye tissues contribute to development of ocular pathology. Using sera collected from onchocerciasis patients as a screening reagent, a cDNA clone

(Ov39) has been isolated from a lambda-gt11 expression library of Onchocerca volvulus. This antigen exhibits immunological crossreactivity with a component of retinal pigment epithelium cells (RPE). Antiserum raised against this recombinant peptide immunoprecipitates a 22,000 M(r) antigen of adult O. volvulus and recognizes a 44,000 M(r) component of bovine RPE by Western blotting. A 44,000 M(r) antigen of cultured human RPE metabolically labeled with S-35-methionine can be immunoprecipitated with the same antiserum. An antigen of the same size is recognized by a rabbit antiserum raised against whole O. volvulus extract. Immunocytochemical studies on cryostat sections of the bovine eye using the antirecombinant sera localizes this antigen to the RPE.

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10944657 Genuine Article#: FV521 Number of References: 52
Title: POU-DOMAIN PROTEINS PIT-1 AND OCT-1 INTERACT TO FORM A HETEROMERIC COMPLEX AND CAN COOPERATE TO INDUCE EXPRESSION OF THE PROLACTIN PROMOTER
Author(s): VOSS JW; WILSON L; ROSENFELD MG
Corporate Source: UNIV CALIF SAN DIEGO,SCH MED,HOWARD HUGHES MED INST/LA JOLLA//CA/92093; UNIV CALIF SAN DIEGO,SCH MED,EUKARYOT REGULATORY BIOL PROGRAM/LA JOLLA//CA/92093; UNIV CALIF SAN DIEGO,SCH MED,CTR MOLEC GENET/LAJOLLA//CA/92093
Journal: GENES & DEVELOPMENT, 1991, V5, N7, P1309-1320
Language: ENGLISH Document Type: ARTICLE
Abstract: Two members of the POU-domain family of transcriptional activators, Pit-1 and Oct-1, are coexpressed in cells of the anterior pituitary gland. We demonstrate that the pituitary-specific developmental regulator Pit-1 can bind as a heterodimer with the widely expressed 100-kD Oct-1 protein to critical tissue-specific cis-active elements in the rat prolactin gene. Pit-1 and Oct-1 can also associate, in the absence of DNA, via their POU domains. Coexpression of Pit-1 and Oct-1 in a heterologous cell type results in reproducible 2- to 2.5-fold synergistic transcriptional effects on genes under control of the native prolactin promoter or of a single Pit-1 response element. These results suggest that a combinatorial pattern of heterodimeric and homodimeric interactions between different members of the POU-domain gene family can result when members of this large family are coexpressed in cells of developing and established organ systems, potentially regulating differential developmental gene activation.

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10944651 Genuine Article#: FV521 Number of References: 85
Title: CHARACTERIZATION AND MOLECULAR-CLONING OF POLYPYRIMIDINE TRACT-BINDING PROTEIN - A COMPONENT OF A COMPLEX NECESSARY FOR PRE-MESSENGER-RNA SPLICING
Author(s): PATTON JG; MAYER SA; TEMPST P; NADALGINARD B
Corporate Source: CHILDRENS HOSP MED CTR,DEPT CARDIOL,HOWARD HUGHES MED INST,MOLEC & CELLULAR CARDIOL LAB/BOSTON//MA/02115; HARVARD UNIV,SCH MED,DEPT MOLEC & CELLULAR PHYSIOL/BOSTON//MA/02115
Journal: GENES & DEVELOPMENT, 1991, V5, N7, P1237-1251
Language: ENGLISH Document Type: ARTICLE
Abstract: Alpha-tropomyosin exons 2 and 3 are spliced in a mutually exclusive manner. Exon 3 is included as the default exon in the mRNA of most cell types, whereas exon 2 is only included in the mRNA of smooth muscle cells. The primary determinant for the default selection of exon 3 is the branchpoint/polypyrimidine tract. This element upstream of exon 3 clearly and effectively outcompetes the corresponding element

upstream of exon 2. To identify trans-acting factors that bind to this important cis element, we used UV cross-linking to identify a 57-kD protein whose binding characteristics directly correlate with 3′-splice-site selection in cis-competition splicing assays. This protein appears to be identical to polypyrimidine tract-binding protein. In this report we have used oligonucleotides derived from peptide sequences to isolate and sequence cDNA clones encoding this 57.2-kD protein. The primary sequence reveals a novel protein with significant homology to other RNA-binding proteins. Expression of the mRNA is detected in all tissues and cells examined, although its levels exhibit tissue-specific and developmental regulation. Using a biochemical complementation assay, we have found that this protein, along with a 100-kD protein, exists as part of a large complex that is required to rescue splicing from depleted nuclear extracts.

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10944643 Genuine Article#: FV521 Number of References: 43
Title: XENOPUS EMBRYOS CONTAIN A SOMITE-SPECIFIC, MYOD-LIKE PROTEIN THAT BINDS TO A PROMOTER SITE REQUIRED FOR MUSCLE ACTIN EXPRESSION
Author(s): TAYLOR MV; GURDON JB; HOPWOOD ND; TOWERS N; MOHUN TJ
Corporate Source: UNIV CAMBRIDGE,DEPT ZOOL,WELLCOME CANC RES CAMPAIGN INST/CAMBRIDGE CB2 2QR//ENGLAND/; NATL INST MED RES/LONDON NW7 1AA//ENGLAND/
Journal: GENES & DEVELOPMENT, 1991, V5, N7, P1149-1160
Language: ENGLISH Document Type: ARTICLE
Abstract: We identify the "M region" of the muscle-specific Xenopus cardiac actin gene promoter from -282 to -348 as necessary for the embryonic expression of a cardiac actin-beta-globin reporter gene injected into fertilized eggs. Four DNA-binding activities in embryo extracts, embryonic M-region factors 1-4 (EMF1-4), are described that interact specifically with this region. One of these, EMF1, is detected in extracts from microdissected somites, which differentiate into muscle, but not in extracts from the adjacent neurectoderm, which differentiates into a variety of other cell types. Moreover, EMF1 is detected in embryo animal caps induced to form mesoderm, which includes muscle, and in which the cardiac actin gene is activated, but not in uninduced animal caps. EMFI is also first detectable when cardiac actin transcripts begin to accumulate; therefore, both its temporal and spatial distributions during Xenopus development are consistent with a role in activating cardiac actin expression. Two lines of evidence suggest that EMFI contains the myogenic factor Xenopus MyoD (XMyoD): (1) XMyoD synthesized in vitro can bind specifically to the same site as EMF1; and (2) antibodies raised against XMyoD bind to EMF1. DNA-binding studies indicate that EMF1 may be a complex between XMyoD and proteins found in muscle and other tissues. Our results suggest that the myogenic factor XMyoD, as a component of somite EMF1, regulates the activation of the cardiac actin gene in developing embryonic muscle by binding directly to a necessary region of the promoter.

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10936961 Genuine Article#: FT922 Number of References: 22
Title: FAILURE OF RECOMBINANT VACCINIA VIRUSES EXPRESSING PLASMODIUM-FALCIPARUM ANTIGENS TO PROTECT SAIMIRI MONKEYS AGAINST MALARIA
Author(s): PYE D; EDWARDS SJ; ANDERS RF; OBRIEN CM; FRANCHINA P; CORCORAN LN; MONGER C; PETERSON MG; VANDENBERG KL; SMYTHE JA; WESTLEY SR; COPPEL RL; WEBSTER TL; KEMP DJ; HAMPSON AW; LANGFORD CJ

Corporate Source: COMMONWEALTH SERUM LABS,45 POPLAR RD/PARKVILLE/VIC 3052/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: INFECTION AND IMMUNITY, 1991, V59, N7, P2403-2411
Language: ENGLISH Document Type: ARTICLE
Abstract: Saimiri sciurus monkeys were immunized at multiple sites with recombinant vaccinia viruses expressing Plasmodium falciparum antigen genes and boosted 4 weeks later. Control monkeys were immunized with a thymidine kinase-negative vaccinia virus mutant. Two weeks later, all of the monkeys were challenged by intravenous inoculation of P. falciparum (Indochina strain) parasites. A group of unimmunized monkeys was challenged in parallel. All of the monkeys that received vaccinia virus recombinants or the control virus produced good anti-vaccinia virus antibody responses. However, those that received a single construct containing ring-infected erythrocyte surface antigen (RESA) given at eight sites did not produce significant antibody to any of the three major RESA repeat epitopes after immunization but were primed for an enhanced antibody response after challenge infection with P. falciparum. Most of the monkeys produced detectable antibodies to the RESA epitopes after challenge infection. One group of monkeys was immunized with four constructs (expressing RESA, two merozoite surface antigens [MSA-1 and MSA-2], and a rhoptry protein [AMA-1]), each given at two sites. While these monkeys failed to produce significant antibody against MSA-2 or AMA-1 after immunization, they produced enhanced responses against these antigens after challenge infection. Immunization involved an allelic form of MSA-2 different from that present in the parasite challenge strain, so that the enhanced responses seen after challenge infection indicated the presence of T-cell epitopes common to both allelic forms. No groups of monkeys showed any evidence of protection against challenge, as determined by examination of the resulting parasitemias.

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10932643 Genuine Article#: FT634 Number of References: 47
Title: EXPRESSION IN ESCHERICHIA-COLI AND SEQUENCING OF THE CODING REGION FOR THE CAPSID PROTEIN OF DUTCH MAEDI-VISNA VIRUS-STRAIN ZZV-1050 - APPLICATION OF RECOMBINANT PROTEIN IN ENZYME-LINKED-IMMUNOSORBENT-ASSAY FOR THE DETECTION OF CAPRINE AND OVINE LENTIVIRUSES
Author(s): ZANONI RG; NAUTA IM; PAULI U; PETERHANS E
Corporate Source: INST VET VIROL,LANGGASSTR 122/CH-3012 BERN//SWITZERLAND/
Journal: JOURNAL OF CLINICAL MICROBIOLOGY, 1991, V29, N7, P1290-1294
Language: ENGLISH Document Type: ARTICLE
Abstract: Maedi-visna in sheep and caprine arthritis-encephalitis in goats are caused by two closely related and widespread lentiviruses. The infections are characterized by life-long virus persistence and slow induction of antiviral antibodies. The diagnosis is based on the detection of antiviral antibodies. We have used the polymerase chain reaction (PCR) to amplify a part of the gag gene coding for the entire capsid protein and for parts of the matrix and nucleocapsid proteins. Sequencing of the PCR fragment of the Dutch maedi-visna virus strain ZZV 1050 revealed 85 and 92% homology to the DNA and deduced amino acid sequences, respectively, of the distantly related Icelandic visna virus strain 1514. The respective homologies with caprine arthritis-encephalitis virus strain CO were 76 and 80%. The PCR fragment was cloned into pGEX-2T and expressed as a glutathione S-transferase fusion protein. The recombinant protein could be detected on immunoblots by using a monoclonal antibody and polyclonal antisera and was further purified by glutathione-based affinity

chromatography. Enzyme-linked immunosorbent assay with purified recombinant fusion protein is shown to be a sensitive and specific diagnostic tool for the detection of lentiviral infection in goats and sheep.

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10931897 Genuine Article#: FT763 Number of References: 35
Title: SEQUENCE AND IMMUNOGENICITY OF THE 70-KDA HEAT-SHOCK PROTEIN OF MYCOBACTERIUM-LEPRAE
Author(s): MCKENZIE KR; ADAMS E; BRITTON WJ; GARSIA RJ; BASTEN A
Corporate Source: UNIV SYDNEY,DEPT MED,CENTENARY INST CANC MED & CELL BIOL/SYDNEY/NSW 2006/AUSTRALIA/; ROYAL PRINCE ALFRED HOSP,DEPT CLIN IMMUNOL/SYDNEY//AUSTRALIA/
Journal: JOURNAL OF IMMUNOLOGY, 1991, V147, N1, P312-319
Language: ENGLISH Document Type: ARTICLE
Abstract: The gene encoding the Mycobacterium leprae 70-kDa heat shock protein has been isolated from a cosmid library using a fragment of the clone JKL2. Southern blot analysis of a positive clone identified a 4.4-kb fragment containing the entire coding region of the gene plus 2.4 kb upstream. Sequencing revealed the gene to encode a 621-amino acid protein, bearing 56% identity with the Escherichia coli dnaK gene product and 47% and 46% identity with the human and Caenorhabditis elegans hsp70, respectively. Comparison with the C-terminal 203 amino acids of the Mycobacterium tuberculosis 71-kDa Ag yielded 70% identity. Recombinant M. leprae p70 was produced in E. coli as a fusion protein (rp70f) with a portion of the schistosomal glutathione -S-transferase, using the expression vector, pGEX-2T. Cleavage with thrombin resulted in the release of a 70.0-kDa protein (rp70c) from the glutathione-S-transferase. Examination of the proteins by immunoblotting demonstrated that anti-M. leprae mAb, L7, and sera from lepromatous leprosy patients bound to both the cleaved and fusion proteins. We compared the T cell reactivity of the M. leprae recombinant proteins with that of mAb affinity -purified bacille Calmette-Guerin (BCG) 70-kDa Ag using proliferation assays. PBMC of BCG vaccinees responded to both M. leprae cleaved and fusion p70, though more subjects responded to the rp70c (18 of 20) than to rp70f (13 of 20). Responses were generally higher to rp70c than to rp70f, however all responses to the M. leprae recombinant proteins were lower than to mAb affinity-purified BCG p70. Thus, the M. leprae 70-kDa heat shock protein elicits T and B cell responses in subjects exposed to mycobacteria, despite its homology with the human hsp70.

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10931790 Genuine Article#: FT582 Number of References: 56
Title: INEFFICIENT HOMOOLIGOMERIZATION CONTRIBUTES TO THE DEPENDENCE OF MYOGENIN ON E2A PRODUCTS FOR EFFICIENT DNA-BINDING
Author(s): CHAKRABORTY T; BRENNAN TJ; LI L; EDMONDSON D; OLSON EN
Corporate Source: UNIV TEXAS,MD ANDERSON CANC CTR,DEPT BIOCHEM & MOLEC BIOL,1515 HOLCOMBE BLVD/HOUSTON//TX/77030; UNIV TEXAS,MD ANDERSON CANC CTR,DEPT BIOCHEM & MOLEC BIOL,1515 HOLCOMBE BLVD/HOUSTON//TX/77030
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1991, V11, N7, P3633-3641
Language: ENGLISH Document Type: ARTICLE
Abstract: Myogenin is a muscle-specific transcription factor that can activate myogenesis; it belongs to a family of transcription factors that share homology within a basic region and an adjacent helix-loop-helix (HLH) motif. Although myogenin alone binds DNA inefficiently, in the presence of the widely expressed HLH proteins E12 and E47 (encoded by the E2A gene), it forms heterooligomers that bind

with high affinity to a DNA sequence known as a kappa-E-2 site. In contrast, E47 and to a lesser extent E12 are both able to bind the kappa-E-2 site relatively efficiently as homooligomers. To define the relative contributions of the basic regions of myogenin and E12 to DNA binding and muscle-specific gene activation, we created chimeras of the two proteins by swapping their basic regions. We showed that myogenin's weak affinity for the kappa-E-2 site is attributable to inefficient homooligomerization and that the myogenin basic domain alone can mediate high-affinity DNA binding when placed in E12. Within a heterooligomeric complex, two basic regions were required to form a high-affinity DNA-binding domain. Basic-domain mutants of myogenin or E2A gene products that cannot bind DNA retained the ability to oligomerize and could abolish DNA binding of the wild-type proteins in vitro. These myogenin and E2A mutants also acted as trans-dominant inhibitors of muscle-specific gene activation in vivo. These findings support the notion that muscle-specific gene activation requires oligomerization between myogenin and E2A gene products and that E2A gene products play an important role in myogenesis by enhancing the DNA-binding activity of myogenin, as well as other myogenic HLH proteins.

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10931692 Genuine Article#: FT762 Number of References: 43
Title: THE RESIDUES OF RAS AND RAP PROTEINS THAT DETERMINE THEIR GAP SPECIFICITIES
Author(s): MARUTA H; HOLDEN J; SIZELAND A; DABACO G
Corporate Source: LUDWIG INST CANC RES,MELBOURNE TUMOR BIOL BRANCH/MELBOURNE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N18, P11661-11668
Language: ENGLISH Document Type: ARTICLE
Abstract: The oncogenic transformation of a normal fibroblast by mutated Ras genes can be reversed by overexpression of a Ras-related gene called Rap1A (or Krev1). Both Ras and Rap1A proteins are G proteins and appear to serve as signal transducers only in the GTP-bound form. Therefore, GAP1 and GAP3, which stimulate the intrinsic GTPase activities of normal Ras and Rap1A proteins, respectively, serve as attenuators of their signal transducing activities. In this paper, we describe the enzymatic properties of several mutated Rap1A and chimeric Ras/Rap1A (or -1B) proteins which lead to the following conclusions: (i) the GAP3-dependent activation of both Rap1A and -1B GTPases requires Gly12, but neither Thr61 nor Gln63; (ii) residues 64 to 70 of the Rap1 GTPases are sufficient to determine their specificities for GAP3; and (iii) residues 61 to 65 of the Ras GTPases are sufficient for determining their specificities for GAP1. Thus, the domains of the Ras or Rap1 proteins that determine whether their signals are attenuated by GAP1 or GAP3 are distinct from the N-terminal domain (residues 21 to 54) that determines whether their signals are oncogenic or antioncogenic. The Arg12 mutant of chimeric HaRas(1-54)/Rap1A(55-184) protein has been previously reported to be oncogenic (Zhang, K., Noda, M., Vass, W. C., Papageorge, A. G., and Lowy, D. R. (1990) Science 249, 162-165). In this paper, we show that the Val12 mutant of chimeric HaRas(1-54)/Rap1B(55-184) protein is also oncogenic, suggesting that the C-terminal geranylgeranylation of the Rap1B protein can replace functionally the C-terminal farnesylation of the Ras protein to allow the G protein to be oncogenic.

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10907127 Genuine Article#: FR448 Number of References: 20

Title: IDENTIFICATION OF AN IMMUNODOMINANT EPITOPE WITHIN THE CAPSID PROTEIN OF HEPATITIS-C VIRUS
Author(s): NASOFF MS; ZEBEDEE SL; INCHAUSPE G; PRINCE AM
Corporate Source: PHARMACIA GENET ENGN INC/LA JOLLA//CA/92037; PHARMACIA GENET ENGN INC/LA JOLLA//CA/92037; NEW YORK BLOOD CTR,VIROL & PARASITOL LAB/NEW YORK//NY/10021
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N12, P5462-5466
Language: ENGLISH Document Type: ARTICLE
Abstract: We have isolated cDNA clones from the 5′ end of the Hutchinson strain of hepatitis C virus. Sequences encoding various segments of the HCV structural region were fused to the gene for glutathione S-transferase and analyzed for the expression of hepatitis C virus-capsid fusion proteins. With a set of these fusion proteins, both human and chimpanzee immune responses to capsid were studied. An immunodominant epitope was located within the amino-terminal portion of capsid that is preferentially recognized by antibodies in both human and chimpanzee hepatitis C virus-positive sera. In addition, analyses of sequential serum samples taken from humans and chimpanzees with either chronic or apparently self-limited infections revealed that a strong anti-capsid response develops rapidly after onset of infection.

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10903790 Genuine Article#: FR047 Number of References: 41
Title: THE T/E1A-BINDING DOMAIN OF THE RETINOBLASTOMA PRODUCT CAN INTERACT SELECTIVELY WITH A SEQUENCE-SPECIFIC DNA-BINDING PROTEIN
Author(s): CHITTENDEN T; LIVINGSTON DM; KAELIN WG
Corporate Source: HARVARD UNIV,SCH MED,DANA FARBER CANC INST/BOSTON//MA/02115; HARVARD UNIV,SCH MED,DEPT PATHOL/BOSTON//MA/02115; HARVARD UNIV,SCH MED,DEPT MED/BOSTON//MA/02115
Journal: CELL, 1991, V65, N6, P1073-1082
Language: ENGLISH Document Type: ARTICLE
Abstract: A DNA-binding site selection and enrichment procedure revealed a sequence-specific DNA-binding activity selectively associated with glutathione S-transferase-retinoblastoma protein chimeras (GST-RB) that had been incubated with a human cell extract. Appropriate mutant forms of GST-RB, incubated in equivalent extracts, did not associate with this specific DNA-binding activity, and a peptide replica of the HPV E7 RB-binding segment selectively inhibited the association of GST-RB with the sequence-specific DNA-binding protein(s). Sequence analysis of oligonucleotides with high affinity for GST-RB complexes, as well as the results of competition binding studies, strongly suggest that RB can associate specifically with the transcription factor E2F or with a protein having closely related DNA-binding properties.

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10903789 Genuine Article#: FR047 Number of References: 55
Title: THE RETINOBLASTOMA PROTEIN COPURIFIES WITH E2F-I, AN E1A-REGULATED INHIBITOR OF THE TRANSCRIPTION FACTOR E2F
Author(s): BAGCHI S; WEINMANN R; RAYCHAUDHURI P
Corporate Source: UNIV ILLINOIS,DEPT BIOCHEM MC536/CHICAGO//IL/60680; UNIV ILLINOIS,COLL DENT MC860,CTR RES PERIODONTAL DIS & ORAL MOLEC BIOL/CHICAGO//IL/60680; WISTAR INST/PHILADELPHIA//PA/19104
Journal: CELL, 1991, V65, N6, P1063-1072
Language: ENGLISH Document Type: ARTICLE
Abstract: Recently, we identified an inhibitory protein, E2F-I, that blocks the DNA-binding activity of the transcription factor E2F. We also showed that the adenovirus E1A protein reverses this inhibitory

activity of E2F-I, thereby restoring the DNA-binding activity of E2F. We have now further purified this inhibitory activity and show that the most purified preparation of E2F-I contains a 105 kd E1A-binding protein. This 105 kd E1A-binding protein cross-reacts with two different antibodies against the retinoblastoma (RB) gene product. Moreover, the RB gene product copurifies with E2F-I activity. Taken together, we conclude that the product of the RB gene is a part of E2F-I and is involved in the regulation of E2F activity.

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10899065 Genuine Article#: FP919 Number of References: 31
Title: MURINE IMMUNE-RESPONSES TO RECOMBINANT TOXOPLASMA-GONDII ANTIGENS
Author(s): PARKER SJ; SMITH FM; JOHNSON AM
Corporate Source: FLINDERS UNIV,MED CTR,DEPT MICROBIOL & INFECT DIS/BEDFORD PK/SA 5042/AUSTRALIA/
Journal: JOURNAL OF PARASITOLOGY, 1991, V77, N3, P402-409
Language: ENGLISH Document Type: ARTICLE
Abstract: Recombinant proteins of the RH strain of Toxoplasma gondii were produced by expression in Escherichia coli as glutathione S-transferase (GST) fusion proteins. Enzyme-linked immunosorbent assays were established using 2 of these fusion proteins termed H4/GST and H11/GST. The assays were able to detect antibodies in the sera of mice orally infected with either the cyst or oocyst stage of a pork isolate of T. gondii.

In addition, the sera from mice infected with 1 of 4 different T. gondii isolates were investigated for their binding to these fusion proteins. Antibodies in the sera of all mice bound to H11/GST, but not all sera recognized H4/GST. Delayed-type hypersensitivity (DTH) responses to the fusion proteins were found when the mice were sensitized intradermally with H4/GST and H11/GST and challenged with the homologous fusion protein. However, no DTH response was recorded when mice were challenged with homologous fusion proteins after infection with T. gondii, or after immunization with a sonicate of the RH strain of the parasite. In addition, cellular responses were not stimulated against either of the fusion proteins in in vitro assays.

These 2 fusion proteins were recognized by anti-T. gondii antibodies in experimental murine infections, and they are therefore potential candidates as antigens in assays for the diagnosis of human toxoplasmosis.

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10881100 Genuine Article#: FP087 Number of References: 23
Title: ISOLATION OF TFC1, A GENE ENCODING ONE OF 2 DNA-BINDING SUBUNITS OF YEAST TRANSCRIPTION FACTOR-TAU (TFIIIC)
Author(s): SWANSON RN; CONESA C; LEFEBVRE O; CARLES C; RUET A; QUEMENEUR E; GAGNON J; SENTENAC A
Corporate Source: CENS,SERV BIOCHIM & GENET MOLEC/F-91191 GIF SURYVETTE//FRANCE/; CENS,INGN PROT LAB/F-91191 GIF SUR YVETTE//FRANCE/; CEN,UNITE CNRS,SERV BIOL STRUCT/F-38041 GRENOBLE//FRANCE/
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N11, P4887-4891
Language: ENGLISH Document Type: ARTICLE
Abstract: Transcription factor TFIIIC mediates tRNA and 5S RNA gene activation by binding to intragenic promoter elements. The factor from Saccharomyces cerevisiae, also called tau, is a large, multisubunit protein (550-650 kDa) containing two polypeptides that interact

directly with DNA encoding tRNA (tDNA). We have obtained peptide sequences from the 95-kDa DNA-binding subunit (tau-95) and cloned the corresponding gene, called TFC1. The gene encodes a polypeptide of calculated M(r) 73,500. However, when TFC1 was transcribed and translated in vitro, the gene product comigrated with tau-95 in SDS/polyacrylamide gels. A fusion protein expressed in bacteria was able to prevent the binding of anti-tau-95 antibodies to tau-tDNA complexes. The TFC1 gene is present in single copy on yeast chromosome II and is essential for growth. Spores containing a disrupted gene germinate but only proceed through a few cell divisions before ceasing to grow. The TFC1-encoded protein contains a potential helix-turn-helix structure and an acidic carboxyl-terminal domain, a feature characteristic of some DNA-binding proteins and transcriptional regulators.

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10880106 Genuine Article#: FP086 Number of References: 23
Title: NONIDENTICAL SUBUNITS OF P21H-RAS FARNESYLTRANSFERASE - PEPTIDE BINDING AND FARNESYL PYROPHOSPHATE CARRIER FUNCTIONS
Author(s): REISS Y; SEABRA MC; ARMSTRONG SA; SLAUGHTER CA; GOLDSTEIN JL; BROWN MS
Corporate Source: UNIV TEXAS,SW MED CTR,DEPT MOLEC GENET/DALLAS//TX/75235; UNIV TEXAS,SW MED CTR,HOWARD HUGHES MED INST/DALLAS//TX/75235
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N16, P10672-10677
Language: ENGLISH Document Type: ARTICLE
Abstract: The protein farnesyltransferase purified from rat brain contains two nonidentical subunits, alpha and beta. The holoenzyme forms a stable complex with [H-3]farnesyl pyrophosphate(FPP) that can be isolated by gel filtration. The [H-3]FPP is not covalently bound to the enzyme; it is released unaltered when the enzyme is denatured. When incubated with an acceptor such as p21H-ras, the complex transfers [H-3]farnesyl from the bound [H-3]FPP to the ras protein. This transfer is not sensitive to dilution by unbound FPP, suggesting that the [H-3]FPP is bound at a site that leads to direct transfer to the p21H-ras acceptor. Cross-linking studies show that the p21H-ras binds to the lower molecular weight subunit (beta-subunit), raising the possibility that the [H-3]FPP binds to the alpha-subunit. If this suggestion can be confirmed, it would invoke a reaction mechanism in which the alpha-subunit acts as a prenyl pyrophosphate carrier that delivers FPP to p21H-ras which is bound to the beta-subunit.

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10874502 Genuine Article#: FM852 Number of References: 42
Title: ENHANCER-BINDING ACTIVITY OF THE TAL-1 ONCOPROTEIN IN ASSOCIATION WITH THE E47/E12 HELIX-LOOP-HELIX PROTEINS
Author(s): HSU HL; CHENG JT; CHEN Q; BAER R
Corporate Source: UNIV TEXAS,SW MED CTR,DEPT MICROBIOL/DALLAS//TX/75235; UNIV TEXAS,SW MED CTR,DEPT MICROBIOL/DALLAS//TX/75235
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1991, V11, N6, P3037-3042
Language: ENGLISH Document Type: ARTICLE
Abstract: Almost 30% of patients with T-cell acute lymphoblastic leukemia (T-ALL) bear structural alterations of tal-1, a presumptive proto-oncogene that encodes sequences homologous to the helix-loop-helix (HLH) DNA-binding and dimerization domain. Analysis of the tal-1 gene product reveals that its HLH domain mediates protein-protein interactions with either of the ubiquitously expressed HLH proteins E47 and E12. The resultant tal-1/E47 and tal-1/E12 heterodimers specifically recognize the E-box DNA sequence motif found

in eucaryotic transcriptional enhancers. Hence, the tal-1 protein shares biochemical properties with other tissue-specific HLH proteins that control cell type determination during myogenesis (e.g., MyoD1) and neurogenesis (e.g., achaete-scute). The data suggest that HLH heterodimers involving tal-1 may function in vivo as transcriptional regulatory factors that influence cell type determination during hematopoietic development.

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10869887 Genuine Article#: FN856 Number of References: 29
Title: BCR ENCODES A GTPASE-ACTIVATING PROTEIN FOR P21RAC
Author(s): DIEKMANN D; BRILL S; GARRETT MD; TOTTY N; HSUAN J; MONFRIES C; HALL C; LIM L; HALL A
Corporate Source: INST CANC RES,CHESTER BEATTY LABS,237 FULHAM RD/LONDON SW3 6JB//ENGLAND/; INST CANC RES,CHESTER BEATTY LABS,237 FULHAM RD/LONDON SW3 6JB//ENGLAND/; LUDWIG INST CANC RES/LONDON W1P 8BT//ENGLAND/; INST NEUROL/LONDON WC1 1PJ//ENGLAND/
Journal: NATURE, 1991, V351, N6325, P400-402
Language: ENGLISH Document Type: ARTICLE
Abstract: MORE than thirty small guanine nucleotide-binding proteins related to the ras-encoded oncoprotein, termed Ras or p21ras, are known 1. They regulate many fundamental processes in all eukaryotic cells, such as growth, vesicle traffic and cytoskeletal organization. GTPase-activating proteins (GAPs) accelerate the intrinsic rate of GTP hydrolysis of Ras-related proteins, leading to down-regulation of the active GTP-bound form 2. For p21ras, two GAP proteins are known, rasGAP and the neurofibromatosis (NF1) gene product 2-5. There is evidence that rasGAP may also be a target protein for regulation by Ras and be involved in downstream signalling 6-8. We have purified a GAP protein for p21rho, which is involved in the regulation of the actin cytoskeleton 9. Partial sequencing of rhoGAP reveals significant homology with the product of the bcr (breakpoint cluster region) gene, the translocation breakpoint in Philadelphia chromosome-positive chronic myeloid leukaemias. We show here that the carboxy-terminal domains of the bcr-encoded protein (Bcr) and of a Bcr-related protein, n-chimaerin, are both GAP proteins for the Ras-related GTP-binding protein, p21rac. This result suggests that Bcr could be a target for regulation by Rac and has important new implications for the role of bcr translocations in leukaemia.

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10868244 Genuine Article#: FM750 Number of References: 21
Title: CLONING AND PARTIAL NUCLEOTIDE-SEQUENCE OF HUMAN GLUTAMIC-ACID DECARBOXYLASE CDNA FROM BRAIN AND PANCREATIC-ISLETS
Author(s): CRAM DS; BARNETT LD; JOSEPH JL; HARRISON LC
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,BURNET CLIN RES UNIT/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, 1991, V176, N3, P1239-1244
Language: ENGLISH Document Type: ARTICLE

1/7/132
10867913 Genuine Article#: FN341 Number of References: 34
Title: A P-GLYCOPROTEIN HOMOLOG OF PLASMODIUM-FALCIPARUM IS LOCALIZED ON THE DIGESTIVE VACUOLE
Author(s): COWMAN AF; KARCZ S; GALATIS D; CULVENOR JG
Corporate Source: WALTER & ELIZA HALL INST MED RES/MELBOURNE/VIC 3050/AUSTRALIA/

Journal: JOURNAL OF CELL BIOLOGY, 1991, V113, N5, P1033-1042
Language: ENGLISH Document Type: ARTICLE
Abstract: Resistance to chloroquine in Plasmodium falciparum bears a striking similarity to the multi-drug resistance (MDR) phenotype of mammalian tumor cells which is mediated by overexpression of P-glycoprotein. We show here that the P. falciparum homologue of the P-glycoprotein (Pgh1) is a 160,000-D protein that is expressed throughout the asexual erythrocytic life cycle of the parasite. Quantitative immunoblotting analysis has shown that the protein is expressed at approximately equal levels in chloroquine resistant and sensitive isolates suggesting that overexpression of Pgh1 is not essential for chloroquine resistance. The chloroquine-resistant cloned line FAC8 however, does express approximately threefold more Pgh1 protein than other isolates which is most likely because of the increased pfmdr1 gene copy number present in this isolate. Immunofluorescence and immunoelectron microscopy has demonstrated that Pgh1 is localized on the membrane of the digestive vacuole of mature parasites. This subcellular localization suggests that Pgh1 may modulate intracellular chloroquine concentrations and has important implications for the normal physiological function of this protein.

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10867246 Genuine Article#: FM459 Number of References: 63
Title: MOLECULAR-CLONING OF MATRIN-3 - A 125-KILODALTON PROTEIN OF THE NUCLEAR MATRIX CONTAINS AN EXTENSIVE ACIDIC DOMAIN
Author(s): BELGRADER P; DEY R; BEREZNEY R
Corporate Source: SUNY BUFFALO,DEPT BIOL SCI/BUFFALO//NY/14260; SUNY BUFFALO,DEPT BIOL SCI/BUFFALO//NY/14260
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N15, P9893-9899
Language: ENGLISH Document Type: ARTICLE
Abstract: We report here the cloning and sequencing of matrin 3, an acidic internal matrix protein, from a rat insuloma cDNA library. The nucleotide sequence has a single open reading frame encoding a polypeptide of 845 amino acids. The Genbank and National Biomedical Research Foundation databases did not contain any sequences similar to that of matrin 3. The primary structure consists of 33% charged residues and is generally hydrophilic. The amino-terminal region (residues 1-120) is positively charged and contains a large number of amino acids with free hydroxyl groups (26 of the first 100 residues) as in the lamins and several non-lamin intermediate filament proteins. A highly acidic domain (approximately 170 amino acids) near the carboxyl terminus, in which 32% of the amino acid residues are acidic (Glu or Asp), is a characteristic found in other nuclear proteins (Earnshaw, W. C. (1987) J. Cell Biol. 105, 1479-1482). A putative nuclear targeting signal sequence (Ser-Lys-Lys-Lys-Leu-Lys-Lys-Val-Glu) is located in the middle of the highly acidic domain. The corresponding human deduced partial amino acid sequence is 96% identical to the rat sequence, indicating that matrin 3 is a highly conserved protein.

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10857486 Genuine Article#: FM042 Number of References: 39
Title: PROTEIN GERANYLGERANYLTRANSFERASE OF SACCHAROMYCES-CEREVISIAE IS SPECIFIC FOR CYS-XAA-XAA-LEU MOTIF PROTEINS AND REQUIRES THE CDC43 GENE-PRODUCT BUT NOT THE DPR1 GENE-PRODUCT
Author(s): FINEGOLD AA; JOHNSON DI; FARNSWORTH CC; GELB MH; JUDD SR; GLOMSET JA; TAMANOI F
Corporate Source: UNIV CHICAGO,DEPT BIOCHEM & MOLEC BIOL,920 E 58TH ST/CHICAGO//IL/60637; UNIV CHICAGO,DEPT BIOCHEM & MOLEC BIOL,920 E 58TH

ST/CHICAGO//IL/60637; UNIV WASHINGTON,HOWARD HUGHES MED INST LAB,DEPTMED/SEATTLE//WA/98195; UNIV WASHINGTON,HOWARD HUGHES MED INST LAB,DEPTBIOCHEM/SEATTLE//WA/98195; UNIV VERMONT,DEPT BIOCHEM & MOLEC BIOL/BURLINGTON//VT/05405; UNIV WASHINGTON,DEPT CHEM/SEATTLE//WA/98195; UNIV WASHINGTON,DEPT BIOCHEM/SEATTLE//WA/98195
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N10, P4448-4452
Language: ENGLISH Document Type: ARTICLE
Abstract: Protein prenylation occurs by modification of proteins with one of at least two isoprenoids, the farnesyl group and the geranylgeranyl group. Protein farnesyltransferases have been identified, but no such enzyme has been identified for geranylgeranylation. We report the identification of an activity in crude soluble yeast extracts that catalyzes the transfer of a geranylgeranyl moiety from geranylgeranyl pyrophosphate to proteins having the C-terminal sequence Cys-Ile-Ile-Leu or Cys-Val-Leu-Leu but not to a similar protein ending with Cys-Ile-Ile-Ser. This activity is dependent upon the CDC43/CAL1 gene, which is involved in budding and the control of cell polarity, but does not require the DPR1/RAM1 gene, which is known to be required for the farnesylation of Ras proteins. These results indicate that the protein geranylgeranyltransferase activity is distinct from the protein farnesyltransferase activity and that its specificity depends in part on the extreme C-terminal leucine in the protein to be prenylated.

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10852947 Genuine Article#: FM037 Number of References: 90
Title: COLONY-STIMULATING FACTOR-I REGULATES NOVEL CYCLINS DURING THE G1 PHASE OF THE CELL-CYCLE
Author(s): MATSUSHIME H; ROUSSEL MF; ASHMUN RA; SHERR CJ
Corporate Source: ST JUDE CHILDRENS HOSP,DEPT TUMOR CELL BIOL/MEMPHIS//TN/38105; ST JUDE CHILDRENS HOSP,HOWARD HUGHES MED INST/MEMPHIS//TN/38105; ST JUDE CHILDRENS HOSP,DEPT HEMATOL ONCOL/MEMPHIS//TN/38105; UNIV TENNESSEE,CTR HLTH SCI,COLL MED,DEPT BIOCHEM/MEMPHIS//TN/38163
Journal: CELL, 1991, V65, N4, P701-713
Language: ENGLISH Document Type: ARTICLE
Abstract: Three mouse cyclin-like (CYL) genes were isolated, two of which are regulated by colony-stimulating factor 1 (CSF-1) during the G1 phase of the macrophage cell cycle. CSF-1 deprivation during G1 leads to rapid degradation of CYL proteins (p36CYL) and correlates with failure to initiate DNA synthesis. However, after entering S phase, macrophages no longer require CSF-1 and can complete cell division without expressing CYL genes. During G1, p36CYL is phosphorylated and associates with a polypeptide antigenically related to p34cdc2. The timing of p36CYL expression, its rapid turnover in the absence of CSF-1, and its phosphorylation and transient binding to a cdc2-related polypeptide suggest that CYL genes may function during S phase commitment.

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10845036 Genuine Article#: FL651 Number of References: 51
Title: VHNF1 IS A HOMEOPROTEIN THAT ACTIVATES TRANSCRIPTION AND FORMS HETERODIMERS WITH HNF1
Author(s): REYCAMPOS J; CHOUARD T; YANIV M; CEREGHINI S
Corporate Source: INST PASTEUR,DEPT BIOTECHNOL,CNRS,UA 1149,UNITEVIRUS ONCOGENES,25 RUE DR ROUX/F-75724 PARIS 15//FRANCE/
Journal: EMBO JOURNAL, 1991, V10, N6, P1445-1457
Language: ENGLISH Document Type: ARTICLE

Abstract: vHNF1 and HNF1 are two nuclear proteins that bind to an essential element in the promoter proximal sequences of albumin and of many other liver-specific genes. HNF1 predominates in hepatocytes but is absent in dedifferentiated hepatoma cells. These cells contain vHNF1 but fail to express most of the liver traits. In the present work we have isolated cDNA clones for vHNF1 and found that it is a homeoprotein homologous to HNF1 in regions important for DNA binding. Unexpectedly, vHNF1 transactivated the albumin promoter in transfection experiments. Like the HNF1 mRNA, the vHNF1 message was found in kidney, liver and intestine although in different proportions. The fact that vHNF1 and HNF1 readily form heterodimers in vitro and the biochemical characterization of vHNF1/HNF1 heterodimers in nuclear extracts of kidney, liver and several cell lines, strongly argue that such heterodimers exist in vivo. Our results raise the possibility that heterodimerization between homeoproteins could be a common phenomenon in higher eukaryotes, which may have implications in the regulatory network sustained between these factors.

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10830754 Genuine Article#: FK184 Number of References: 35
Title: THE DROSOPHILA HOMOLOG OF VERTEBRATE MYOGENIC-DETERMINATION GENES ENCODES A TRANSIENTLY EXPRESSED NUCLEAR-PROTEIN MARKING PRIMARY MYOGENIC CELLS
Author(s): PATERSON BM; WALLDORF U; ELDRIDGE J; DUBENDORFER A; FRASCH M; GEHRING WJ
Corporate Source: NCI,BIOCHEM LAB/BETHESDA//MD/20892; UNIV BASEL,BIOCTR,DEPT CELL BIOL/CH-4056 BASEL//SWITZERLAND/; UNIV ZURICH,INST ZOOL/CH-8057 ZURICH//SWITZERLAND/; MAX PLANCK INST DEV BIOL,GENET ABT 3/D-7400 TUBINGEN//FED REP GER/
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N9, P3782-3786
Language: ENGLISH Document Type: ARTICLE
Abstract: We have isolated a cDNA clone, called Dmyd for Drosophila myogenic-determination gene, that encodes a protein with structural and functional characteristics similar to the members of the vertebrate MyoD family. Dmyd clone encodes a polypeptide of 332 amino acids with 82% identity to MyoD in the 41 amino acids of the putative helix-loop-helix region and 100% identity in the 13 amino acids of the basic domain proposed to contain the essential recognition code for muscle-specific gene activation. Low-stringency hybridizations indicate that Dmyd is not a member of a multigene family similar to MyoD in vertebrates. Dmyd is a nuclear protein in Drosophila, consistent with its role as a nuclear-gene regulatory factor, and is proposed to be a transiently expressed marker for muscle founder cells. We have used an 8-kilobase promoter fragment from the gene, which contains the first 55 amino acids of the Dmyd protein, joined to lacZ, to follow myogenic precursor cells into muscle fibers with antibodies to beta-galactosidase and to Dmyd. Unlike the myogenic factors in vertebrate muscle cells, Dmyd appears to be expressed at a much lower level in differentiated Drosophila muscles, so Dmyd cannot be followed continuously as a muscle marker. This fact is reflected in the loss of Dmyd RNA expression in 12- to 24-hr embryos, a major period of early myogenesis, as well as in the undetectable level of the nuclear antigen in primary cultures of embryonic and adult Drosophila muscle.

1/7/138
10828852 Genuine Article#: FK182 Number of References: 27
Title: PROTEIN FARNESYLTRANSFERASE AND GERANYLGERANYLTRANSFERASE SHARE A

COMMON ALPHA-SUBUNIT
Author(s): SEABRA MC; REISS Y; CASEY PJ; BROWN MS; GOLDSTEIN JL
Corporate Source: UNIV TEXAS,SW MED CTR,DEPT MOLEC GENET/DALLAS//TX/75235; DUKE UNIV,MED CTR,CELL GROWTH REGULAT & ONCOGENESIS SECT/DURHAM//NC/27710
Journal: CELL, 1991, V65, N3, P429-434
Language: ENGLISH Document Type: ARTICLE
Abstract: Mammalian farnesyltransferase, which attaches a 15 carbon isoprenoid, farnesyl, to a cysteine in p21ras proteins, contains two subunits, alpha and beta. The beta-subunit is known to bind p21ras proteins. We show here that the alpha-subunit is shared with another prenyltransferase that attaches 20 carbon geranylgeranyl to Ras-related proteins. Farnesyltransferase and geranylgeranyltransferase have similar molecular weights on gel filtration, but are separated by ion exchange chromatography. Both enzymes are precipitated and immunoblotted by multiple antibodies directed against the alpha-subunit of farnesyltransferase. The two transferases have different specificities for the protein acceptor; farnesyltransferase prefers methionine or serine at the COOH-terminus and geranylgeranyltransferase prefers leucine. The current data indicate that both prenyltransferases are heterodimers that share a common alpha-subunit with different beta-subunits.

1/7/139
10828340 Genuine Article#: FJ255 Number of References: 27
Title: RECOGNITION OF THE N-TERMINAL, C-TERMINAL, AND INTERIOR PORTIONS OF HBX BY SERA FROM PATIENTS WITH HEPATITIS-B
Author(s): KAY A; DEDINECHIN SD; VITVITSKITREPO L; MANDART E; SHAMOON BM; GALIBERT F
Corporate Source: HOP ST LOUIS,CTR HAYEM,CNRS,UPR 41/F-75475 PARIS 10//FRANCE/; INSERM,U241/F-69008 LYONS//FRANCE/
Journal: JOURNAL OF MEDICAL VIROLOGY, 1991, V33, N4, P228-235
Language: ENGLISH Document Type: ARTICLE
Abstract: We have cloned and expressed in Escherichia coli three different parts of the HBx open reading frame, the N- and C-termini and the interior or central portion, using two vector systems. The sera of 43 hepatitis B virus patients representing three clinical categories-asymptomatic carriers, chronic active hepatitis, and hepatitis B patients with cirrhosis-known to be anti-HBx positive, were tested for reactivity against these constructs by Western blotting. The great majority of sera, regardless of the clinical categories, clearly recognise all three parts of HBx, strongly suggesting that the normal mechanism of biosynthesis of the HBx gene product is a straight-forward translation of the open reading frame starting from the first ATG. However, asymptomatic carriers show a marked, often almost exclusive, preference for recognition of the central portion of HBx, while patients with chronic hepatitis and patients with cirrhosis generally recognise all three parts of HBx to a similar extent.

1/7/140
10819284 Genuine Article#: FJ822 Number of References: 42
Title: AN ABA AND GA MODULATED GENE EXPRESSED IN THE BARLEY EMBRYO ENCODES AN ALDOSE REDUCTASE RELATED PROTEIN
Author(s): BARTELS D; ENGELHARDT K; RONCARATI R; SCHNEIDER K; ROTTER M; SALAMINI F
Corporate Source: MAX PLANCK INST ZUCHTUNGSFORSCH,CARL VON LINNE WEG 10/D-5000 COLOGNE 30//FED REP GER/
Journal: EMBO JOURNAL, 1991, V10, N5, P1037-1043

Language: ENGLISH Document Type: ARTICLE
Abstract: In most higher plants a period of desiccation is the terminal event in embryogenesis. Excised barley embryos acquire desiccation tolerance at a precise developmental stage and cDNA clones have been isolated which are temporally linked with desiccation tolerance. One such clone (pG22-69) with a putative gene product of 34 kd displays high structural homology to mammalian genes encoding an NADPH dependent aldose reductase involved in the synthesis of sorbitol. This first aldose reductase gene of plants is expressed constitutively during embryo maturation and is modulated by the plant hormones abscisic acid (ABA) and gibberellic acid (GA). Immunohistochemistry showed that the protein is preferentially expressed in tissues formed at early stages in embryogenesis. Measurements of enzymatic activity indicate that pG22-69 encodes an active aldose reductase. The finding of this reductase activity and the cloning of the corresponding gene supports the existence of a metabolic pathway in plants playing a role in the synthesis of osmolytes like sorbitol. The significance of this work is that genes of related structure and functions are being used in diverse organisms to fulfil stress related biological requirements.

1/7/141
10818471 Genuine Article#: FH624 Number of References: 25
Title: CLONING OF TOXOPLASMA-GONDII GENE FRAGMENTS ENCODING DIAGNOSTIC ANTIGENS
Author(s): JOHNSON AM; ILLANA S
Corporate Source: FLINDERS UNIV,FLINDERS MED CTR,SCH MED,DEPT MICROBIOL & INFECT DIS/BEDFORD PK/SA 5042/AUSTRALIA/
Journal: GENE, 1991, V99, N1, P127-132
Language: ENGLISH Document Type: NOTE
Abstract: Two Toxoplasma gondii gene fragments, which encode polypeptides that can be used as diagnostic antigens in an enzyme-linked immunosorbent assay were cloned and their nucleotide sequence was determined. One of the fragments (derived from the H4 gene) is 682 bp long. The mRNA of the single-copy H11 gene is 1900 nt long. The native polypeptides encoded by the H4 and H11 genes are 25 and 41 kDa, respectively. Based on computer analysis of the deduced amino acid sequences of the polypeptides encoded by the gene fragments, both appear to be very hydrophilic and that encoded by the H11 fragment has a high antigenic index profile. These results are consistent with the diagnostic usefulness of the polypeptides encoded by the gene fragments.

1/7/142
10807840 Genuine Article#: FH157 Number of References: 46
Title: MONOCLONAL-ANTIBODIES SPECIFIC FOR THE CORE PROTEIN OF THE BETA-SUBUNIT OF THE GASTRIC PROTON PUMP (H+/K+ ATPASE) - AN AUTOANTIGEN TARGETED IN PERNICIOUS-ANEMIA
Author(s): JONES CM; TOH BH; PETTITT JM; MARTINELLI TM; HUMPHRIS DC; CALLAGHAN JM; GOLDKORN I; MU FT; GLEESON PA
Corporate Source: MONASH UNIV,MONASH MED SCH,DEPT PATHOL & IMMUNOL,COMMERCIAL RD/PRAHRAN/VIC 3181/AUSTRALIA/; MONASH UNIV,MONASH MED SCH,DEPT PATHOL & IMMUNOL,COMMERCIAL RD/PRAHRAN/VIC 3181/AUSTRALIA/
Journal: EUROPEAN JOURNAL OF BIOCHEMISTRY, 1991, V197, N1, P49-59
Language: ENGLISH Document Type: ARTICLE
Abstract: The gastric H+/K+-transporting adenosine triphosphatase (H+/K+ ATPase) (proton pump) consists of a catalytic alpha-subunit and a recently proposed 60-90-kDa glycoprotein beta-subunit. Using dog gastric membranes as the antigen, we have produced two murine

monoclonal antibodies, 4F11 (IgG1) and 3A6 (IgA), which are specific for the 60-90-kDa glycoprotein.

The monoclonal antibodies (1) specifically stained the cytoplasm of unfixed and formalin-fixed dog gastric parietal cells; (2) specifically reacted by ELISA with gastric tubulovesicular membranes; (3) recognised epitopes located on the luminal face of parietal cell tubulovesicular membranes, the site of the proton pump, by immunogold electron microscopy; (4) immunoblotted a 60-90-kDa molecule from tubulovesicular membranes and a 35-kDa component from peptide N-glycosidase-F-treated membrane extracts; (5) immunoblotted the 60-90-kDa parietal cell autoantigen associated with autoimmune gastritis and pernicious anemia, purified by chromatography on parietal cell autoantibody- or tomato-lectin-Sepharose 4B affinity columns, and the 35-kDa protein core of this autoantigen; this autoantigen has amino acid sequence similarity to the beta-subunit of the related Na+/K+-transporting adenosine triphosphatase (Na+/K+ ATPase) [Toh et al. (1990) Proc. Natl Acad. Sci. 87, 6418-6422]; (6) co-precipitated a molecule of 95 kDa with the 60-90-kDa molecule from I-125-labelled detergent extracts of dog tubulovesicular membranes; and (7) co-purified the catalytic alpha-subunit of the H+/K+ ATPase with the 60-90-kDa molecule by immunoaffinity chromatography of tubulovesicular membrane extracts on a monoclonal antibody 3A6-Sepharose 4B column, indicating a physical association between the two molecules.

These results provide further evidence that the 60-90-kDa glycoprotein is the beta-subunit of the gastric H+/K+ ATPase. We conclude that the monoclonal antibodies specifically recognise luminal epitopes on the 35-kDa core protein of the 60-90-kDa beta-subunit of the gastric proton pump, a major target molecule in autoimmune gastritis and pernicious anaemia. These monoclonal antibodies will be valuable probes to study the structure and function of this associated beta-subunit, as well as the ontogeny of the gastric proton pump.

1/7/143
10799152 Genuine Article#: FG913 Number of References: 39
Title: A FISSION-YEAST GENE ENCODING A PROTEIN WITH FEATURES OF PROTEIN-TYROSINE-PHOSPHATASES
Author(s): OTTILIE S; CHERNOFF J; HANNIG G; HOFFMAN CS; ERIKSON RL
Corporate Source: HARVARD UNIV,DEPT CELLULAR & DEV BIOL,16 DIVIN AVE/CAMBRIDGE//MA/02138; BOSTON COLL,DEPT BIOL/CHESTNUT HILL//MA/02167
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N8, P3455-3459
Language: ENGLISH Document Type: ARTICLE
Abstract: Degenerate oligonucleotide probes encoding sequences conserved among mammalian protein-tyrosine-phosphatases (PTPases) were used to amplify DNA fragments from a Schizosaccharomyces pombe cDNA library by polymerase chain reaction (PCR) methods. A cloned PCR product predicted peptide sequences similar to those found in PTPases but not identical to any published sequences. A S. pombe gene, designated pypl+, was identified in a cDNA library with this PCR probe, cloned, and sequenced. The sequence of the gene predicted a 550-amino acid protein with M(r) 61,586, which includes amino acid sequences that are highly conserved in mammalian PTPases. Disruption of the pypl+ gene resulted in viable cells. Overexpression of the pypl+ gene in S. pombe permitted detection of a protein of apparent M(r) 63,000.

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10794358 Genuine Article#: FG727 Number of References: 35
Title: STRUCTURE, CALMODULIN-BINDING, AND CALCIUM-BINDING PROPERTIES OF RECOMBINANT-ALPHA SPECTRIN POLYPEPTIDES
Author(s): DUBREUIL RR; BRANDIN E; REISBERG JHS; GOLDSTEIN LSB; BRANTON D
Corporate Source: HARVARD UNIV,DEPT CELLULAR & DEV BIOL,16 DIVIN AVE/CAMBRIDGE//MA/02138
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N11, P7189-7193
Language: ENGLISH Document Type: ARTICLE
Abstract: We examined the structure and the distribution of binding activities within bacterially produced fragments of Drosophila alpha-spectrin. By electron microscopy, purified spectrin fragments resembled the corresponding regions of native spectrin. The contour lengths of recombinant spectrin molecules were proportional to the length of their coding sequences, which is consistent with current models of spectrin structure in which individual segments of the polypeptide contribute independently to the structure of the native molecule. We localized two sites at which calcium may regulate spectrin function. First, a site responsible for calmodulin binding to Drosophila alpha-spectrin was identified near the junction of repetitive segments 14 and 15. Second, a domain of Drosophila alpha-spectrin that includes two EF hand calcium-binding sequences bound Ca-45 in blot overlay assays. EF hand sequences from a homologous domain of Drosophila alpha-actinin did not bind calcium under the same conditions.

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10794331 Genuine Article#: FG727 Number of References: 36
Title: EFFECTS OF ALTERNATE RNA SPLICING ON GLUCOKINASE ISOFORM ACTIVITIES IN THE PANCREATIC-ISLET, LIVER, AND PITUITARY
Author(s): LIANG Y; JETTON TL; ZIMMERMAN EC; NAJAFI H; MATSCHINSKY FM; MAGNUSON MA
Corporate Source: VANDERBILT UNIV,MED CTR,SCH MED,DEPT MOLEC PHYSIOL & BIOPHYS,708 LIGHT HALL/NASHVILLE//TN/37232; UNIV PENN,DEPT BIOCHEM & BIOPHYS/PHILADELPHIA//PA/19104; VANDERBILT UNIV,MED CTR,SCH MED,DEPT MED/NASHVILLE//TN/37232; UNIV PENN,DIABET RES CTR/PHILADELPHIA//PA/19104; VANDERBILT UNIV,MED CTR,SCH MED,DEPT MOLEC PHYSIOL & BIOPHYS/NASHVILLE//TN/37232
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1991, V266, N11, P6999-7007
Language: ENGLISH Document Type: ARTICLE
Abstract: Different glucokinase isoforms are produced by tissue-specific alternative RNA splicing in the liver and pancreatic islet, the only tissues in which glucokinase activity has been detected. To determine whether differences in protein structure brought about by alternative RNA splicing have an effect on glucose phosphorylating activity, we expressed cDNAs encoding four different hepatic and islet glucokinase isoforms and determined the K(m) and V(max) of each. When the glucokinase B1 and L1 isoforms were expressed in eukaryotic cells, both high K(m) glucose phosphorylating activity and immunoreactive protein were detected. However, when the glucokinase B2 and L2 isoforms were expressed, both of which differ by deletion of 17 amino acids in a region between the putative glucose and ATP-binding domains, no high K(m) glucose phosphorylating activity and much less immunoreactive protein were detected. When the glucokinase B1 and B2 isoforms were expressed in Escherichia coli as fusion proteins with glutathione S-transferase, affinity-purified B1 fusion protein was able to phosphorylate glucose whereas the B2 fusion protein was not, thus indicating that the lack of glucose phosphorylating activity from both the B2 and L2 isoforms is due to lack of intrinsic activity in addition

to accumulation of less protein. The K(m) values of the B1 and L1 isoforms, which differ from each other by 15 amino acids at the NH2 terminus, were similar, but the V(max) of the B1 isoform was 2.8-fold higher than that of the L1 isoform. Mutagenesis of the first two potential initiation codons in the glucokinase B1 cDNA from ATG to GTC (methionine to valine) indicated that the first ATG was crucial for activity and is, therefore, the likely translation initiation codon. Messenger RNAs encoding both the B2 and L2 isoforms of glucokinase were detected in islet and liver by polymerase chain reaction amplification of total cDNA, indicating that mRNAs utilizing this weak alternate splice acceptor site in the fourth exon are normally present in both the liver and islet but as minor components.

A regulatory role for weak alternate splice acceptor and donor sites in the glucokinase gene was suggested by examining the expression of the gene in the pituitary and in AtT-20 cells. Interestingly, although glucokinase mRNAs of appropriate sizes were detected in both the AtT-20 cells and rat pituitaries, neither exhibited any detectable high K(m) glucose phosphorylating activity. The sequence of three polymerase chain reaction-amplified cDNA clones indicated that the cognate mRNA, which originated from the upstream promoter region also active in the pancreatic beta-cell, had undergone two alternative splicing events. First, an alternate splice donor site in the second exon was used, resulting in a 25-base deletion and frameshift such that a peptide of only 68 amino acids is encoded. Second, the same alternate splice acceptor site in the fourth exon of the gene, which gives rise to the glucokinase B2 and L2 isoforms, was utilized, resulting in an additional 51-base deletion. Either of these alternate splicing events alone would be sufficient to account for the discrepancy between detectable gene expression and lack of glucokinase activity in pituitary. Altogether these data show that alternate RNA splicing of the glucokinase gene transcript is regulated in a tissue-specific manner and can affect expression of glucokinase activity. Thus, in addition to the regulation of glucokinase gene expression in the liver and islet by transcriptional mechanisms, the expression of glucokinase activity in the pituitary is also regulated by a post-transcriptional mechanism.

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10794061 Genuine Article#: FH092 Number of References: 37
Title: HIV-1 STRUCTURAL GENE-EXPRESSION REQUIRES THE BINDING OF MULTIPLE REV MONOMERS TO THE VIRAL RRE - IMPLICATIONS FOR HIV-1 LATENCY
Author(s): MALIM MH; CULLEN BR
Corporate Source: DUKE UNIV,MED CTR,HOWARD HUGHES MED INST/DURHAM//NC/27710 ; DUKE UNIV,MED CTR,DEPT MED/DURHAM//NC/27710; DUKE UNIV,MED CTR,DEPT MICROBIOL & IMMUNOL/DURHAM//NC/27710
Journal: CELL, 1991, V65, N2, P241-248
Language: ENGLISH Document Type: ARTICLE
Abstract: Expression of the structural proteins of HIV-1 requires the direct interaction of the viral Rev trans-activator with its cis-acting RNA target sequence, the Rev response element or RRE. Here, we demonstrate that this specific RNA-binding event is, as expected, mediated by the conserved arginine-rich motif of Rev. However, we also show that amino acid residues located proximal to this basic domain that are critical for in vivo Rev function are dispensable for sequence-specific binding to the RRE. Instead, these sequences are required for the multimerization of Rev on the viral RRE target sequence. The observation that Rev function requires the sequential

binding of multiple Rev molecules to the RRE provides a biochemical explanation for the observed threshold effect for Rev function in vivo and suggests a molecular model for the high incidence of latent infection by HIV-1.

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10783696 Genuine Article#: FF664 Number of References: 29
Title: ATTEMPTS TO INDUCE RESISTANCE IN MICE TO SCHISTOSOMA-JAPONICUM AND SCHISTOSOMA-MANSONI BY EXPOSURE TO CRUDE SCHISTOSOME ANTIGENS PLUS CLONED GLUTATHIONE-S-TRANSFERASES
Author(s): MITCHELL GF; DAVERN KM; WOOD SM; WRIGHT MD; ARGYROPOULOS VP; MCLEOD KS; TIU WU; GARCIA EG
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,IMMUNOPARASITOL UNIT/PARKVILLE/VIC 3050/AUSTRALIA/; UNIV PHILIPPINES,COLL PUBL HLTH,DEPT PARASITOL/MANILA//PHILIPPINES/
Journal: IMMUNOLOGY AND CELL BIOLOGY, 1990, V68, DEC, P377-385
Language: ENGLISH Document Type: ARTICLE
Abstract: Several attempts have been made to induce resistance in mice to Schistosoma japonicum (Philippines) or Schistosoma mansoni by exposure to living male and/or female adult worms, their antigens or irradiated cercariae. No resistance was demonstrated in the following cases: re-exposure of mice to cercariae following praziquantel (PZQ) treatment of existing infection; re-exposure of mice following cyclosporin A (CsA) treatment at the time of first cercarial exposure; subcutaneous or intraperitoneal deposition of living male or female worms; repeated intranasal administration of crude worm homogenates plus Bordetella pertussis vaccine (BPV) as adjuvant. Homologous Co-60-irradiated cercariae were very effective at inducing resistance to infection with S. mansoni but not to infection with S. japonicum (Philippines) in a limited series of experiments. A regime of infection, immunization with homologous Escherichia coli-derived glutathione-S-transferases (GST), then PZQ treatment followed by homologous re-exposure did not result in significant resistance in either the S. mansoni or the S. japonicum (Philippines) systems. Mice given irradiated cercariae plus GST were not more resistant to subsequent S. mansoni infection than mice given irradiated cercariae alone. The results generally confirm and extend those reported by others with the conclusion that resistance to schistosomes in mice is difficult to achieve by exposure to adult worm antigens alone. Moreover, additional immunization with the GST available to date as cloned gene products, and injected in Freund's complete adjuvant, does not influence the outcome of exposure to crude worm antigens including any additive effects of protective irradiated cercariae.

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10783694 Genuine Article#: FF664 Number of References: 28
Title: MAPPING OF THE T-CELL AND B-CELL EPITOPES OF THE MYCOBACTERIUM-BOVIS PROTEIN, MPB70
Author(s): BILLMANJACOBE H; RADFORD AJ; ROTHEL JS; WOOD PR
Corporate Source: CSIRO,DIV ANIM HLTH,ANIM HLTH LAB,PRIVATE BAG 1/PARKVILLE/VIC 3052/AUSTRALIA/
Journal: IMMUNOLOGY AND CELL BIOLOGY, 1990, V68, DEC, P359-365
Language: ENGLISH Document Type: ARTICLE
Abstract: A clone coding for the entire gene for the Mycobacterium bovis protein antigen MPB70 was used to produce a series of overlapping subclones by making a series of deletions from the 3' end of the gene. The subclones expressed incomplete MPB70 proteins as fusions with glutathione-S-transferase. The insert DNA was sequenced to determine

the extent of the deletion and the proteins expressed by the clones were examined for the presence of T cell and B cell epitopes. T cell epitopes were mapped by measuring the ability of recombinant antigens to stimulate gamma interferon (gamma-IFN) production in a whole blood culture system. gamma-IFN production was measured using a sandwich enzyme immunoassay specific for bovine gamma-IFN. B cell epitopes were mapped with a series of anti-MPB70 monoclonal antibodies using an indirect enzyme immunoassay.

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10763863 Genuine Article#: FE950 Number of References: 54
Title: EXPRESSION OF GENES ENCODING THE TRANSCRIPTION FACTOR SRF DURING EARLY DEVELOPMENT OF XENOPUS-LAEVIS - IDENTIFICATION OF A CARG BOX-BINDING ACTIVITY AS SRF
Author(s): MOHUN TJ; CHAMBERS AE; TOWERS N; TAYLOR MV
Corporate Source: NATL INST MED RES,DEV BIOCHEM LAB,MILL HILL/LONDON NW7 1AA//ENGLAND/; DEPT ZOOL,CLIN RES CTR,MOLEC EMBRYOL GRP/CAMBRIDGE CB2 3EJ//ENGLAND/
Journal: EMBO JOURNAL, 1991, V10, N4, P933-940
Language: ENGLISH Document Type: ARTICLE
Abstract: cDNA clones encoding the sequence-specific DNA binding protein, serum response factor (SRF), have been isolated from a Xenopus laevis neurula library and their nucleotide sequence determined. The Xenopus SRF (SRF(X)) gene produces multiple-sized transcripts, present at 10(5) copies per unfertilized egg. A similar level is detected in the embryo during early cleavage, but SRF(X) transcripts accumulate rapidly following gastrulation. The protein they encode is similar in sequence to human SRF in its central and carboxy-terminal regions, but possesses a divergent amino-terminal portion. We have previously described a Xenopus embryo sequence-specific binding activity that recognized the CArG motif of the cardiac actin gene promoter. Here we show that the DNA-binding characteristics of synthetic SRF(X) are indistinguishable from those of the embryo factor. Moreover, antiserum raised against the synthetic SRF(X) recognizes this factor. Together, these results establish that the same factor binds to elements required for constitutive transcription in Xenopus oocytes, muscle-specific gene expression in Xenopus embryos and serum-responsive transcription in cultured amphibian cells.

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10763858 Genuine Article#: FE950 Number of References: 56
Title: THE DIMENSIONS OF THE LYMPHOCYTE-T GLYCOPROTEIN LEUKOSIALIN AND IDENTIFICATION OF LINEAR PROTEIN EPITOPES THAT CAN BE MODIFIED BY GLYCOSYLATION
Author(s): CYSTER JG; SHOTTON DM; WILLIAMS AF
Corporate Source: UNIV OXFORD,SIR WILLIAM DUNN SCH PATHOL,MRC,CELLULAR IMMUNOL RES UNIT/OXFORD OX1 3RE//ENGLAND/; UNIV OXFORD,DEPT ZOOL/OXFORD OX1 3PS//ENGLAND/
Journal: EMBO JOURNAL, 1991, V10, N4, P893-902
Language: ENGLISH Document Type: ARTICLE
Abstract: Leukosialin (CD43) is a major glycoprotein of T lymphocytes whose extracellular domain of 224 amino acids contains on average one O-linked carbohydrate unit per three amino acids. This suggests an unfolded structure for the extracellular domain which has now been established to extend to a length of 45 nm by transmission electron microscopy following low angle rotary shadowing. The antigenicity of rat leukosialin has been studied using nine monoclonal antibodies (MAbs) whose binding is differentially affected by the cell type on

which leukosialin is expressed and by the removal of sialic acid. From these observations it appears that the epitopes are affected by glycosylation, yet seven of the nine MAbs reacted clearly with the extracellular domain of leukosialin expressed in an unglycosylated form in Escherichia coli. The MAbs showing this positive reaction included three of the four antibodies whose epitopes were affected by neuraminidase treatment of leukosialin. It thus appears that linear protein epitopes are recognized and that some of these can be modified in the native structure by glycosylation. The positions of the antigenic determinants have been mapped by expressing fusion proteins of different lengths and the identity of one epitope was proven by the binding of two MAbs to an octapeptide expressed as a fusion protein. For three MAbs, the location of epitopes in the native protein was confirmed by electron microscopy of shadowed leukosialin-Fab complexes. Overall it is concluded that leukosialin is a major component at the periphery of the T lymphocyte and that despite its high level of glycosylation, protein determinants are exposed that could be ligands in cell interactions.

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10756529 Genuine Article#: FD871 Number of References: 22
Title: RECOGNITION OF RECOMBINANT TOXOPLASMA-GONDII ANTIGENS BY HUMAN SERA IN AN ELISA
Author(s): TENTER AM; JOHNSON AM
Corporate Source: FLINDERS UNIV,MED CTR,DEPT MICROBIOL & INFECT DIS/BEDFORD PK/SA 5042/AUSTRALIA/; FLINDERS UNIV,MED CTR,DEPT MICROBIOL & INFECT DIS/BEDFORD PK/SA 5042/AUSTRALIA/
Journal: PARASITOLOGY RESEARCH, 1991, V77, N3, P197-203
Language: ENGLISH Document Type: ARTICLE
Abstract: We developed an enzyme-linked immunosorbent assay (ELISA) that uses one of two recombinant polypeptides, termed H4/GST and H11/GST, as diagnostic antigens for the detection of antibodies to Toxoplasma gondii in human sera. A total of 59 sera from humans with acute toxoplasmosis, 194 sera from patients with chronic toxoplasmosis, and 151 sera from subjects who were not infected with T. gondii were examined. In all, 68% of the sera from humans with acute toxoplasmosis reacted positively with one or both recombinant T. gondii antigens. By contrast, only 14% of those from patients with chronic toxoplasmosis recognized H4/GST or H11/GST. None of the sera from humans who were not infected with T. gondii, including patients with echinococcosis, entamoebosis, toxocarosis, trichinellosis, glandular fever, or rheumatoid arthritis, recognized H4/GST or H11/GST.

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10741685 Genuine Article#: FD558 Number of References: 39
Title: A FUNCTIONAL INTERACTION BETWEEN THE C-TERMINAL DOMAIN OF RNA POLYMERASE-II AND THE NEGATIVE REGULATOR SIN1
Author(s): PETERSON CL; KRUGER W; HERSKOWITZ I
Corporate Source: UNIV CALIF SAN FRANCISCO,DEPT BIOCHEM & BIOPHYS/SAN FRANCISCO//CA/94143
Journal: CELL, 1991, V64, N6, P1135-1143
Language: ENGLISH Document Type: ARTICLE
Abstract: The C-terminal domain (CTD) of the largest subunit of yeast RNA polymerase II contains 26-27 tandem copies of a conserved heptapeptide of unknown function. Yeast strains whose CTD contains ten heptamers are viable but defective for transcription of the INO1 gene and cold sensitive for growth. Deletion of the SIN1 gene, which codes for a DNA-binding protein that negatively regulates HO transcription,

restores INO1 transcription and reduces the cold sensitivity of such strains. A SIN1 deletion suppresses the lethality of a CTD with nine heptamer repeats but not with seven repeats. These observations indicate a functional relationship between SIN1 and the CTD: the CTD might remove SIN1 from DNA, or removal of SIN1 may be a prerequisite for function of the CTD. The SWI1, SWI2, and SWI3 genes, whose products activate HO transcription by antagonizing SIN1, are also required for INO1 transcription and may assist the CTD. In addition, an intact CTD binds nonspecifically to DNA in vitro.

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10728308 Genuine Article#: FC458 Number of References: 17
Title: STRUCTURE OF SM25, AN ANTIGENIC INTEGRAL MEMBRANE GLYCOPROTEIN OF ADULT SCHISTOSOMA-MANSONI
Author(s): ALI PO; JEFFS SA; MEADOWS HM; HOLLYER T; OWEN CA; ABATH FGC; ALLEN R; HACKETT F; SMITHERS SR; SIMPSON AJG
Corporate Source: NATL INST MED RES,DIV PARASITOL,RIDGEWAY,MILL HILL/LONDON NW7 1AA//ENGLAND/; NATL INST MED RES,DIV PARASITOL,RIDGEWAY,MILL HILL/LONDON NW7 1AA//ENGLAND/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1991, V45, N2, P215-222
Language: ENGLISH Document Type: ARTICLE
Abstract: Sm25 is the principal antigen recognised by antibodies from mice protectively vaccinated with isolated tegumental membranes of adult Schistosoma mansoni. The full-length amino acid sequence of this protein has been deduced from the sequence of two cDNAs, one isolated by screening a cDNA library and the other, including the 5′ end of the gene, amplified directly from adult worm RNA using the polymerase chain reaction. The predicted sequence represents a nascent polypeptide of M(r)21 500. Following cleavage of a predicted signal sequence, the M(r) of the resulting polypeptide is 17 600. The polypeptide contains 2 potential sites for N-linked glycosylation and a hydrophobic domain at the C-terminus that could facilitate membrane association. Analysis of the mature gene product confirmed that Sm25 is an N-glycosylated integral membrane protein and that the M(r) of the deglycosylated polypeptide is between 15 000 and 20 000.

1/7/154
10728306 Genuine Article#: FC458 Number of References: 35
Title: A NOVEL PROTEIN ANTIGEN OF THE MALARIA PARASITE PLASMODIUM-FALCIPARUM, LOCATED ON THE SURFACE OF GAMETES AND SPOROZOITES
Author(s): MOELANS IIMD; MEIS JFGM; KOCKEN C; KONINGS RNH; SCHOENMAKERS JGG
Corporate Source: CATHOLIC UNIV NIJMEGEN,FAC SCI,DEPT MOLEC BIOL/6525 ED NIJMEGEN//NETHERLANDS/; CATHOLIC UNIV NIJMEGEN,FAC SCI,DEPT MOLEC BIOL/6525 ED NIJMEGEN//NETHERLANDS/; CATHOLIC UNIV NIJMEGEN,FAC MED,INST MED MICROBIOL/6525 ED NIJMEGEN//NETHERLANDS/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1991, V45, N2, P193-204
Language: ENGLISH Document Type: ARTICLE
Abstract: A Plasmodium falciparum cDNA clone was isolated of which the insert is transcribed at high rates as a 1.4-kb mRNA in the sexual stages of the malaria parasite. The cDNA clone contains a copy of a non-interrupted gene which codes for a protein of 157 amino acids (M(r) = 16607). This 16-kDa protein does not contain repetitive sequences and is characterised by a putative N-terminal signal sequence, a hydrophobic membrane anchor sequence and a highly hydrophilic C-terminal region suggesting that it is an integral membrane protein. Rabbit antisera raised against a synthetic peptide covering amino acids 31-47 of the 16-kDa protein and against recombinant fusion proteins

recognised the 16-kDa antigen in protein extracts of gametocytes, macrogamete/zygotes and sporozoites by Western blot analysis. The rabbit antisera also reacted with gametes, gametocytes and sporozoites in a standard immunofluorescence assay. By immunoelectron microscopy using the protein A-gold method the 16-kDa protein could be clearly visualised on the surface of macrogametes and sporozoites, whereas the antigen was not detectable in the asexual erythrocytic stages of the parasite. The 16-kDa antigen of P. falciparum therefore might have the potential to elicit a dual protective immune response against the sporozoite and sexual stage parasites.

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10727645 Genuine Article#: FC852 Number of References: 62
Title: 2 NOVEL PROTEIN-TYROSINE KINASES, EACH WITH A 2ND PHOSPHOTRANSFERASE-RELATED CATALYTIC DOMAIN, DEFINE A NEW CLASS OF PROTEIN-KINASE
Author(s): WILKS AF; HARPUR AG; KURBAN RR; RALPH SJ; ZURCHER G; ZIEMIECKI A
Corporate Source: ROYAL MELBOURNE HOSP,LUDWIG INST CANC RES/PARKVILLE/VIC 3050/AUSTRALIA/; UNIV BERN,INST CLIN & EXPTL CANC RES/CH-3004 BERN//SWITZERLAND/
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1991, V11, N4, P2057-2065
Language: ENGLISH Document Type: ARTICLE
Abstract: The protein-tyrosine kinases (PTKs) are a burgeoning family of proteins, each of which bears a conserved domain of 250 to 300 amino acids capable of phosphorylating substrate proteins on tyrosine residues. We recently exploited the existence of two highly conserved sequence elements within the catalytic domain to generate PTK-specific degenerate oligonucleotide primers (A. F. Wilks, Proc. Natl. Acad. Sci. USA 86: 1603-1607, 1989). By application of the polymerase chain reaction, portions of the catalytic domains of several novel PTKs were amplified. We describe here the primary sequence of one of these new PTKs, JAK1 (from Janus kinase), a member of a new class of PTK characterized by the presence of a second phosphotransferase-related domain immediately N terminal to the PTK domain. The second phosphotransferase domain bears all the hallmarks of a protein kinase, although its structure differs significantly from that of the PTK and threonine/serine kinase family members. A second member of this family (JAK2) has been partially characterized and exhibits a similar array of kinase-related domains. JAK1 is a large, widely expressed membrane-associated phosphoprotein of approximately 130,000 Da. The PTK activity of JAK1 has been located in the C-terminal PTK-like domain. The role of the second kinaselike domain is unknown.

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10727617 Genuine Article#: FC852 Number of References: 54
Title: RECOGNITION OF U1 AND U2 SMALL NUCLEAR RNAS CAN BE ALTERED BY A 5-AMINO-ACID SEGMENT IN THE U2 SMALL NUCLEAR RIBONUCLEOPROTEIN PARTICLE (SNRNP) B'' PROTEIN AND THROUGH INTERACTIONS WITH U2 SNRNP-A' PROTEIN
Author(s): BENTLEY RC; KEENE JD
Corporate Source: DUKE UNIV,MED CTR,DEPT MICROBIOL & IMMUNOL/DURHAM//NC/27710; DUKE UNIV,MED CTR,DEPT MICROBIOL & IMMUNOL/DURHAM//NC/27710; DUKE UNIV,MED CTR,DEPT PATHOL/DURHAM//NC/27710
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1991, V11, N4, P1829-1839
Language: ENGLISH Document Type: ARTICLE
Abstract: We have investigated the sequence elements influencing RNA recognition in two closely related small nuclear ribonucleoprotein particle (snRNP) proteins, U1 snRNP-A and U2 snRNP-B". A 5-amino-acid

segment in the RNA-binding domain of the U2 snRNP-B" protein was found to confer U2 RNA recognition when substituted into the corresponding position in the U1 snRNP-A protein. In addition, B", but not A, was found to require the U2 snRNP-A' protein as an accessory factor for high-affinity binding to U2 RNA. The pentamer segment in B" that conferred U2 RNA recognition was not sufficient to allow the A' enhancement of U2 RNA binding by B", thus implicating other sequences in this protein-protein interaction. Sequence elements involved in these interactions have been localized to variable loops of the RNA-binding domain as determined by nuclear magnetic resonance spectroscopy (D. Hoffman, C. C. Query, B. Golden, S. W. White, and J. D. Keene, Proc. Natl. Acad. Sci. USA, in press). These findings suggest a role for accessory proteins in the formation of RNP complexes and pinpoint amino acid sequences that affect the specificity of RNA recognition in two members of a large family of proteins involved in RNA processing.

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10719635 Genuine Article#: FC216 Number of References: 40
Title: RNA-BINDING DOMAIN OF THE A-PROTEIN COMPONENT OF THE U1 SMALL NUCLEAR RIBONUCLEOPROTEIN ANALYZED BY NMR-SPECTROSCOPY IS STRUCTURALLY SIMILAR TO RIBOSOMAL-PROTEINS
Author(s): HOFFMAN DW; QUERY CC; GOLDEN BL; WHITE SW; KEENE JD
Corporate Source: DUKE UNIV,MED CTR,DEPT MICROBIOL & IMMUNOL/DURHAM//NC/27710; DUKE UNIV,MED CTR,DEPT MICROBIOL & IMMUNOL/DURHAM//NC/27710
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N6, P2495-2499
Language: ENGLISH Document Type: ARTICLE
Abstract: An RNA recognition motif (RRM) of almost-equal-to 80 amino acids constitutes the core of RNA-binding domains found in a large family of proteins involved in RNA processing. The U1 RNA-binding domain of the A protein component of the human U1 small nuclear ribonucleoprotein (RNP), which encompasses the RRM sequence, was analyzed by using NMR spectroscopy. The domain of the A protein is a highly stable monomer in solution consisting of four antiparallel beta-strands and two alpha-helices. The highly conserved RNP1 and RNP2 consensus sequences, containing residues previously suggested to be involved in nucleic acid binding, are juxtaposed in adjacent beta-strands. Conserved aromatic side chains that are critical for RNA binding are clustered on the surface of the molecule adjacent to a variable loop that influences recognition of specific RNA sequences. The secondary structure and topology of the RRM are similar to those of ribosomal proteins L12 and L30, suggesting a distant evolutionary relationship between these two types of RNA-associated proteins.

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10719546 Genuine Article#: FC216 Number of References: 23
Title: OVEREXPRESSION OF BETA-2-MICROGLOBULIN IN TRANSGENIC MOUSE ISLET BETA-CELLS RESULTS IN DEFECTIVE INSULIN-SECRETION
Author(s): ALLISON J; MALCOLM L; CULVENOR J; BARTHOLOMEUSZ RK; HOLMBERG K; MILLER JFAP
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N6, P2070-2074
Language: ENGLISH Document Type: ARTICLE
Abstract: Overexpression of heavy chains of the class I major

histocompatibility complex in islet beta-cells of transgenic mice is known to induce nonimmune diabetes. We have now overexpressed the secretory protein beta-2-microglobulin in beta-cells. Transgenic mice of one lineage had normal islets. Mice of another lineage did not become overtly diabetic but showed significant depletion of beta-cell insulin. When mice were made homozygous for the transgene locus, they developed diabetes. Introduction of the beta-2-microglobulin chain into class I heavy chain transgenic mice resulted in a significant improvement in their islet morphology and insulin content, and the female mice remained normoglycemic. These results suggest that different transgene molecules overexpressed in beta-cells can cause islet dysfunction, though not necessarily overt diabetes, and that this effect is mediated by the level of transgene expression. Evidence is provided to show that beta-cell disruption by transgene overexpression occurs at the level of protein and involves a defect in insulin secretion.

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10719288 Genuine Article#: FB298 Number of References: 5
Title: CHARACTERIZATION OF A NOVEL CALCIUM-BINDING PROTEIN OF DROSOPHILA EXPRESSED IN A SUBSET OF BRAIN-CELLS AND A SMALL THORACIC MUSCLE
Author(s): REIFEGERSTE R; PAUST C; LIPSKI N; HOFBAUER A; BURK B; BUCHNER E
Corporate Source: UNIV WURZBURG,INST GENET & MIKROBIOL/D-8700 WURZBURG//FED REP GER/
Journal: JOURNAL OF NEUROGENETICS, 1991, V7, N2-3, P142
Language: ENGLISH Document Type: MEETING ABSTRACT

1/7/160
10712001 Genuine Article#: FB077 Number of References: 20
Title: IGE BINDING-STUDIES WITH LARGE PEPTIDES EXPRESSED FROM DER P-II CDNA CONSTRUCTS
Author(s): CHUA KY; GREENE WK; KEHAL P; THOMAS WR
Corporate Source: PRINCESS MARGARET HOSP,WESTERN AUSTRALIAN RES INST CHILD HLTH,ROBERTS RD/SUBIACO/WA 6008/AUSTRALIA/; PRINCESS MARGARET HOSP,WESTERN AUSTRALIAN RES INST CHILD HLTH,ROBERTS RD/SUBIACO/WA 6008/AUSTRALIA/
Journal: CLINICAL AND EXPERIMENTAL ALLERGY, 1991, V21, N2, P161-166
Language: ENGLISH Document Type: ARTICLE
Abstract: The major mite allergen Der p II shows marked resistance to denaturation and is expressed from cDNA in bacteria with almost all of its IgE binding activity. Despite these properties, the IgE binding activity appears to be dependent on maintaining the complete primary structure. Random fragment libraries of cDNA, able to code for up to 93 of the 129 amino acid residue protein, did not express IgE binding peptides. Large overlapping peptides 1-69, 69-129 and 42-117 expressed as the fusions from the glutathione transferase of pGEX vectors only had binding activity with IgE in 15 out of 57 sera, and this was typically weak. Sera from children with atopic dermatitis bound IgE in seven out of eight cases but this was also weak compared with their strong reactivity to intact recombinant Der p II. The inability of such large peptides to form IgE binding structures suggests that the antigenic determinants of Der p II are highly conformational and restricted.

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10706258 Genuine Article#: FB413 Number of References: 63
Title: THE MAIZE REGULATORY LOCUS OPAQUE-2 ENCODES A DNA-BINDING PROTEIN WHICH ACTIVATES THE TRANSCRIPTION OF THE B-32 GENE

Author(s): LOHMER S; MADDALONI M; MOTTO M; DIFONZO N; HARTINGS H; SALAMINI F; THOMPSON RD
Corporate Source: MAX PLANCK INST ZUCHTUNGSFORSCH,CARL VON LINNE WEG 10/D-5000 COLOGNE 30//FED REP GER/; IST SPERIMENTALE CEREALICOLTURA,SEZ BERGAMO/I-24100 BERGAMO//ITALY/
Journal: EMBO JOURNAL, 1991, V10, N3, P617-624
Language: ENGLISH Document Type: ARTICLE
Abstract: The maize locus, Opaque-2, controls the expression in developing endosperm of structural genes encoding a family of storage proteins, the 22 kd zeins, and an abundant albumin, termed b-32. It is shown that the promoter of the b-32 gene is activated in vivo in the presence of the O2 gene product and that the information necessary for this activation resides in a 440 bp DNA fragment containing five O2 binding sites (GATGAPyPuTGPu). Two of these sites are embedded in copies of the 'endosperm box', a motif thought to be involved in endosperm-specific expression, which is also represented in 22 kd zein promoters. The O2 protein is also shown to be capable of binding in vitro and activating in vivo, its own promoter.

1/7/162
10705822 Genuine Article#: FA940 Number of References: 47
Title: MECHANISM OF ACTION OF AN ACIDIC TRANSCRIPTIONAL ACTIVATOR INVITRO
Author(s): LIN YS; GREEN MR
Corporate Source: UNIV MASSACHUSETTS,MED CTR,PROGRAM MOLEC MED/WORCESTER//MA/01605; HARVARD UNIV,DEPT BIOCHEM & MOLEC BIOL/CAMBRIDGE//MA/02138
Journal: CELL, 1991, V64, N5, P971-981
Language: ENGLISH Document Type: ARTICLE
Abstract: Transcription of a eukaryotic structural gene by RNA polymerase II requires the ordered assembly of general transcription factors on the promoter to form a preinitiation complex. Here we analyze affinity-purified complexes at various stages of assembly to determine the mechanism of action of an acidic transcriptional activator. We show that the activator can function in the absence of ATP and stimulates transcription by increasing the number of functional preinitiation complexes. The activator effects this increase by recruiting the general transcription factor TFIIB to the promoter. Using protein affinity chromatography we demonstrate a specific interaction between an acidic activating region and TFIIB. Based on these combined results, we propose that TFIIB is a direct target of an acidic activator.

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10697391 Genuine Article#: EZ838 Number of References: 54
Title: GENETIC-ANALYSIS OF SUPEROXIDE-DISMUTASE, THE 23 KILODALTON ANTIGEN OF MYCOBACTERIUM-TUBERCULOSIS
Author(s): ZHANG Y; LATHIGRA R; GARBE T; CATTY D; YOUNG D
Corporate Source: HAMMERSMITH HOSP,ROYAL POSTGRAD MED SCH,MRC,TB & RELATED INFECT UNIT/LONDON W12 0HS//ENGLAND/; HAMMERSMITH HOSP,ROYAL POSTGRAD MED SCH,MRC,TB & RELATED INFECT UNIT/LONDON W12 0HS//ENGLAND/; UNIV BIRMINGHAM,SCH MED,DEPT IMMUNOL/BIRMINGHAMB15 2TJ/W MIDLANDS/ENGLAND/
Journal: MOLECULAR MICROBIOLOGY, 1991, V5, N2, P381-391
Language: ENGLISH Document Type: ARTICLE
Abstract: The gene encoding a 23 kilodalton protein antigen has been cloned from Mycobacterium tuberculosis by screening of a recombinant DNA library with monoclonal antibodies. The product of the gene has been identified as the superoxide dismutase (SOD) of M. tuberculosis on the basis of sequence comparison and by expression of the recombinant

protein in a functionally active form. The derived amino acid sequence of M. tuberculosis SOD reveals a close similarity to manganese-containing SODs from other organisms, in spite of the fact that previous studies using the purified enzyme have identified iron as the preferred metal ion ligand. SOD is present in the extracellular fluid of logarithmic-phase cultures of M. tuberculosis, but the structural gene is not preceded by a signal peptide sequence. Insertion of the M. tuberculosis SOD gene into a novel shuttle vector demonstrated the presence of a promoter which functions efficiently in mycobacteria but is ineffective in Escherichia coli.

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10693093 Genuine Article#: FA691 Number of References: 73
Title: MAX - A HELIX-LOOP-HELIX ZIPPER PROTEIN THAT FORMS A SEQUENCE-SPECIFIC DNA-BINDING COMPLEX WITH MYC
Author(s): BLACKWOOD EM; EISENMAN RN
Corporate Source: FRED HUTCHINSON CANC RES CTR,DIV BASIC SCI/SEATTLE//WA/98104; UNIV WASHINGTON,SCH MED,DEPT PATHOL/SEATTLE//WA/98195
Journal: SCIENCE, 1991, V251, N4998, P1211-1217
Language: ENGLISH Document Type: ARTICLE
Abstract: The myc protooncogene family has been implicated in cell proliferation, differentiation, and neoplasia, but its mechanism of function at the molecular level is unknown. The carboxyl terminus of Myc family proteins contains a basic region helix-loop-helix leucine zipper motif (bHLH-Zip), which has DNA-binding activity and has been predicted to mediate protein-protein interactions. The bHLH-Zip region of c-Myc was used to screen a complementary DNA (cDNA) expression library, and a bHLH-Zip protein, termed Max, was identified. Max specifically associated with c-Myc, N-Myc, and L-Myc proteins, but not with a number of other bHLH, bZip, or bHLH-Zip proteins. The interaction between Max and c-Myc was dependent on the integrity of the c-Myc HLH-Zip domain, but not on the basic region or other sequences outside the domain. Furthermore, the Myc-Max complex bound to DNA in a sequence-specific manner under conditions where neither Max nor Myc exhibited appreciable binding. The DNA-binding activity of the complex was dependent on both the dimerization domain and the basic region of c-Myc. These results suggest that Myc family proteins undergo a restricted set of interactions in the cell and may belong to the more general class of eukaryotic DNA-binding transcription factors.

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10686950 Genuine Article#: EY993 Number of References: 27
Title: RECOMBINANT FUSION PROTEINS OF PROTEIN-A AND PROTEIN-G WITH GLUTATHIONE-S-TRANSFERASE AS REPORTER MOLECULES
Author(s): LEW AM; BECK DJ; THOMAS LM
Corporate Source: VET RES INST,475 MICKLEHAM RD/ATTWOOD/VIC 3049/AUSTRALIA/ ; VET RES INST,475 MICKLEHAM RD/ATTWOOD/VIC 3049/AUSTRALIA/; WALTER & ELIZA HALL INST MED RES/MELBOURNE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF IMMUNOLOGICAL METHODS, 1991, V136, N2, P211-219
Language: ENGLISH Document Type: ARTICLE
Abstract: The regions encoding the IgG-binding domains of protein A (PA) and protein G (PG) were cloned into the bacterial expression vector pGEX. Both proteins were expressed in Escherichia coli as fusion proteins with glutathione S-transferase (PA-GST and PG-GST) and were found to be soluble, abundant and easily purified in one step from the bacterial lysate by affinity chromatography on immobilized glutathione. Yields of 50 mg/litre of cultures were obtained. Both purified fusion

proteins were shown to be functional in a variety of immunochemical procedures. In radial diffusion tests, PA-GST precipitated IgG from human, squirrel monkey, rabbit, dog, cat and pig but not mouse, sheep, goat, cow, horse or chicken. PG-GST formed precipitin bands with IgG from human, rabbit, mouse, pig, sheep, goat, cow and horse but not squirrel monkey, dog, cat and chicken IgG. The fusion proteins were shown to function as effective detection reagents in ELISA and Western blotting. Glutathione agarose beads with bound fusion protein were shown to be useful for immunoprecipitation.

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10683166 Genuine Article#: EZ478 Number of References: 40
Title: EXPRESSION OF THE CYSTIC-FIBROSIS GENE IN NONEPITHELIAL INVERTEBRATE CELLS PRODUCES A REGULATED ANION CONDUCTANCE
Author(s): KARTNER N; HANRAHAN JW; JENSEN TJ; NAISMITH AL; SUN SZ; ACKERLEY CA; REYES EF; TSUI LC; ROMMENS JM; BEAR CE; RIORDAN JR
Corporate Source: HOSP SICK CHILDREN,RES INST/TORONTO M5G 1X8/ONTARIO/CANADA/; UNIV TORONTO,DEPT PHYSIOL/TORONTO M5S 1A8/ONTARIO/CANADA/; UNIV TORONTO,DEPT MOLEC & MED GENET/TORONTO M5S1A8/ONTARIO/CANADA/; UNIV TORONTO,DEPT BIOCHEM & CLIN BIOCHEM/TORONTO M5S 1A8/ONTARIO/CANADA/; MCGILL UNIV,DEPT PHYSIOL/MONTREAL H3G 1Y6/QUEBEC/CANADA/
Journal: CELL, 1991, V64, N4, P681-691
Language: ENGLISH Document Type: ARTICLE
Abstract: The nature of involvement of the cystic fibrosis gene product (CFTR) in epithelial anion transport is not yet understood. We have expressed CFTR in Sf9 insect cells using the baculovirus expression vector system. Reactivity with antibodies against 12 different epitopes spanning the entire sequence suggested that the complete polypeptide chain was synthesized. Immunogold labeling showed localization to both cell-surface and intracellular membranes. Concomitant with CFTR expression, these cells exhibited a new cAMP-stimulated anion permeability. This conductance, monitored both by radioiodide efflux and patch clamping, strongly resembled that present in several CFTR-expressing human epithelial cells. These findings demonstrate that CFTR can function in heterologous nonepithelial cells and lend support to the possibility that CFTR may itself be a regulated anion channel.

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10680932 Genuine Article#: EY721 Number of References: 30
Title: MOLECULAR-CLONING OF TAENIA-TAENIAEFORMIS ONCOSPHERE ANTIGEN GENES
Author(s): COUGLE WG; LIGHTOWLERS MW; BOGH HO; RICKARD MD; JOHNSON KS
Corporate Source: CAMBRIDGE ANTIBODY TECHNOL LTD,DALY RES LABS,BABRAHAM HALL/CAMBRIDGE CB2 4AT//ENGLAND/; UNIV MELBOURNE,CTR VET CLIN/WERRIBEE/VIC/AUSTRALIA/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1991, V45, N1, P137-146
Language: ENGLISH Document Type: ARTICLE
Abstract: Infection of mice with the cestode Taenia taeniaeformis exhibits several important features common to other cestode infections, including the ability to vaccinate with crude antigen mixtures [1]. Partial purification of the protective oncosphere antigens has been reported with a cutout from deoxycholate (DOC) acrylamide gels; this cutout was called fraction II (FII), and comprises approximately 10% of total DOC-soluble oncosphere antigen. Western blots of DOC gels probed with anti-FII antisera revealed a series of 3-5 discrete bands within the FII region [2]. Further fractionation of the FII antigens on DOC gels was impractical due to limitations in supply of oncospheres, so a

cDNA library was constructed from 150 ng of oncosphere mRNA and screened with alpha-FII antisera. Two distinct clone families were identified, oncA and oncB. Antibodies affinity-purified on either of two representative members, oncA1 and oncB1, recognised all the FII bands. Individual FII bands excised from a DOC gel resolved into an overlapping series of molecules when re-run on SDS-PAGE, indicating that each FII band consisted of several polypeptides of differing molecular weight. Immunoprecipitates resolved on SDS-PAGE revealed that alpha-FII recognised 3 major oncosphere antigens, of 62, 34 and 25 kDa; antisera against oncB precipitated both the 34- and 25-kDa antigens, whereas alpha-oncA antisera precipitated the 62-kDa antigen. We conclude that oncA and oncB encode the major antigens in the FII complex. The 62-kDa antigen encoded by oncA1 was the only common antigen precipitated by anti-FII and two other antisera raised against different protective extracts, suggesting that it may be a protective component in all three. Southern blot results indicate that oncA and oncB are distinct genes present at low copy number in the genome. Evidence is also presented suggesting that some cestode mRNAs, including oncA, may use variant polyadenylation signals.

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10674954 Genuine Article#: EY617 Number of References: 29
Title: ISOLATION OF CDNA-ENCODING A NEWLY IDENTIFIED MAJOR ALLERGENIC PROTEIN OF RYE-GRASS POLLEN - INTRACELLULAR TARGETING TO THE AMYLOPLAST
Author(s): SINGH MB; HOUGH T; THEERAKULPISUT P; AVJIOGLU A; DAVIES S; SMITH PM; TAYLOR P; SIMPSON RJ; WARD LD; MCCLUSKEY J; PUY R; KNOX RB
Corporate Source: UNIV MELBOURNE,SCH BOT/PARKVILLE/VIC 3052/AUSTRALIA/; UNIV MELBOURNE,SCH BOT/PARKVILLE/VIC 3052/AUSTRALIA/; LUDWIG INST CANC RES,MELBOURNE BRANCH/PARKVILLE/VIC 3052/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; MONASH UNIV,SCH MED,DEPT PATHOL & IMMUNOL/PRAHRAN/VIC 3181/AUSTRALIA/
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N4, P1384-1388
Language: ENGLISH Document Type: ARTICLE
Abstract: We have identified a major allergenic protein from rye-grass pollen, tentatively designated Lol pIb of 31 kDa and with pI 9.0. A cDNA clone encoding Lol pIb has been isolated, sequenced, and characterized. Lol pIb is located mainly in the starch granules. This is a distinct allergen from Lol pI, which is located in the cytosol. Lol pIb is synthesized in pollen as a pre-allergen with a transit peptide targeting the allergen to amyloplasts. Epitope mapping of the fusion protein localized the IgE binding determinant in the C-terminal domain.

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10669694 Genuine Article#: EX833 Number of References: 2
Title: A SIMPLE METHOD FOR THE RECOVERY OF PURIFIED RECOMBINANT PEPTIDES CLEAVED FROM GLUTATHIONE-S-TRANSFERASE-FUSION PROTEINS (REPRINTED FROM PEPTIDE RESEARCH, VOL 3, PG 167-168, 1990)
Author(s): ABATH FGC; SIMPSON AJG
Corporate Source: NATL INST MED RES,DIV PARASITOL,RIDGEWAY,MILL HILL/LONDON NW7 1AA//ENGLAND/; NATL INST MED RES,DIV PARASITOL,RIDGEWAY,MILL HILL/LONDON NW7 1AA//ENGLAND/
Journal: BIOTECHNIQUES, 1991, V10, N2, P178
Language: ENGLISH Document Type: NOTE
Abstract: The method described here allows the recovery of specific peptides immediately after cleavage of GST-fusion proteins with thrombin.

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10658932 Genuine Article#: EX361 Number of References: 66
Title: IDENTIFICATION OF CELLULAR PROTEINS THAT CAN INTERACT SPECIFICALLY WITH THE T/E1A-BINDING REGION OF THE RETINOBLASTOMA GENE-PRODUCT
Author(s): KAELIN WG; PALLAS DC; DECAPRIO JA; KAYE FJ; LIVINGSTON DM
Corporate Source: HARVARD UNIV,SCH MED,DANA FARBER CANC INST/BOSTON//MA/02115; HARVARD UNIV,SCH MED/BOSTON//MA/02115; NCI,USN,MED ONCOL BRANCH/BETHESDA//MD/20814; UNIFORMED SERV UNIV HLTH SCI/BETHESDA//MD/20814
Journal: CELL, 1991, V64, N3, P521-532
Language: ENGLISH Document Type: ARTICLE

1/7/171
10650916 Genuine Article#: EW647 Number of References: 16
Title: EUKARYOTIC PROTEINS EXPRESSED IN ESCHERICHIA-COLI - AN IMPROVED THROMBIN CLEAVAGE AND PURIFICATION PROCEDURE OF FUSION PROTEINS WITH GLUTATHIONE-S-TRANSFERASE
Author(s): GUAN KL; DIXON JE
Corporate Source: PURDUE UNIV,DEPT BIOCHEM/W LAFAYETTE//IN/47907; PURDUE UNIV,WALTHER CANC INST/W LAFAYETTE//IN/47907
Journal: ANALYTICAL BIOCHEMISTRY, 1991, V192, N2, P262-267
Language: ENGLISH Document Type: ARTICLE

1/7/172
10625146 Genuine Article#: EV176 Number of References: 43
Title: SPK1, A NEW KINASE FROM SACCHAROMYCES-CEREVISIAE, PHOSPHORYLATES PROTEINS ON SERINE, THREONINE, AND TYROSINE
Author(s): STERN DF; ZHENG P; BEIDLER DR; ZERILLO C
Corporate Source: YALE UNIV,SCH MED,DEPT PATHOL,310 CEDAR ST/NEW HAVEN//CT/06510; YALE UNIV,SCH MED,DEPT PHARMACOL/NEW HAVEN//CT/06510; YALE UNIV,SCH MED,IMMUNOBIOL SECT/NEW HAVEN//CT/06510
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1991, V11, N2, P987-1001
Language: ENGLISH Document Type: ARTICLE

1/7/173
10617575 Genuine Article#: ET825 Number of References: 40
Title: A BLUETONGUE SEROGROUP-REACTIVE EPITOPE IN THE AMINO TERMINAL HALF OF THE MAJOR CORE PROTEIN VP7 IS ACCESSIBLE ON THE SURFACE OF BLUETONGUE VIRUS-PARTICLES
Author(s): EATON BT; GOULD AR; HYATT AD; COUPAR BEH; MARTYN JC; WHITE JR
Corporate Source: CSIRO,AUSTRALIAN ANIM HLTH LAB,PO BAG 24/GEELONG/VIC 3220/AUSTRALIA/
Journal: VIROLOGY, 1991, V180, N2, P687-696
Language: ENGLISH Document Type: ARTICLE

1/7/174
10615068 Genuine Article#: ET538 Number of References: 34
Title: ATP-INDUCED PROTYROSINASE SYNTHESIS AND CARBOXYL-TERMINAL PROCESSING IN NEUROSPORA-CRASSA
Author(s): KUPPER U; NIEDERMANN DM; SCHILLING BC; LERCH K
Corporate Source: GIVAUDAN RES CO LTD,UEBERLANDSTR 138/CH-8600 DUBENDORF//SWITZERLAND/; UNIV ZURICH,INST BIOCHEM/CH-8057 ZURICH//SWITZERLAND/
Journal: PIGMENT CELL RESEARCH, 1990, V3, N4, P207-213
Language: ENGLISH Document Type: ARTICLE
Abstract: The effects of 3′-5′ cyclic AMP and ATP upon tyrosinase induction in Neurospora crassa were examined. Northern analysis of total cellular RNA revealed rapid de novo synthesis of protyrosinase after

addition of these substances to stationary-phase mycelia. The maturation of protyrosinase in crude extracts of mycelia was followed by Western analysis. Polyclonal rabbit antiserum directed against the denatured carboxyl-terminal extension of protyrosinase does recognize the proform and several intermediate forms of different molecular weight but not mature tyrosinase. Disruption of ATP-induced mycelia in sodium phosphate buffer (pH 6.0) demonstrate processing at the carboxyl-terminal end of protrosinase. The activity assays revealed that protyrosinase is an inactive precursor and that at least two active forms of slightly different molecular weight are present in crude extracts. Maturation of protyrosinase thus involves specific and sequential proteolytic cleavage at the carboxyl-terminus. These results suggest the presence of a tyrosinase activator in Neurospora crassa mycelia, which is kept apart from protyrosinase in the intact mycelium.

1/7/175
10609888 Genuine Article#: ET521 Number of References: 44
Title: THE NONCATALYTIC SRC HOMOLOGY REGION-2 SEGMENT OF ABL TYROSINE KINASE BINDS TO TYROSINE-PHOSPHORYLATED CELLULAR PROTEINS WITH HIGH-AFFINITY
Author(s): MAYER BJ; JACKSON PK; BALTIMORE D
Corporate Source: WHITEHEAD INST BIOMED RES,9 CAMBRIDGE CTR/CAMBRIDGE//MA/02142; ROCKEFELLER UNIV/NEW YORK//NY/10021
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N2, P627-631
Language: ENGLISH Document Type: ARTICLE
Abstract: Several proteins implicated in the regulation of cell proliferation contain a common noncatalytic domain, src homology region 2 (SH2). We have used the bacterially expressed SH2 domain of abl protein-tyrosine kinase to evaluate the ability of this domain to bind to cellular proteins. abl SH2 specifically bound to a number of tyrosine-phosphorylated proteins from cells transformed by tyrosine kinase oncogenes in a filter-binding assay and to a subset of those proteins in solution. The SH2 probe bound almost exclusively to tyrosine-phosphorylated proteins, and binding was eliminated by dephosphorylation of cell proteins. Free phosphotyrosine could partially disrupt SH2 binding, suggesting that phosphotyrosine is directly involved in the binding interaction. These results demonstrate that an SH2 domain is sufficient to confer direct, high-affinity phosphotyrosine-dependent binding to proteins and suggest a general role for SH2 domains in cellular signaling pathways.

1/7/176
10609855 Genuine Article#: ET521 Number of References: 25
Title: IRA2, AN UPSTREAM NEGATIVE REGULATOR OF RAS IN YEAST, IS A RAS GTPASE-ACTIVATING PROTEIN
Author(s): TANAKA K; LIN BK; WOOD DR; TAMANOI F
Corporate Source: UNIV CHICAGO,DEPT BIOCHEM & MOLEC BIOL/CHICAGO//IL/60637; UNIV CHICAGO,DEPT BIOCHEM & MOLEC BIOL/CHICAGO//IL/60637
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1991, V88, N2, P468-472
Language: ENGLISH Document Type: ARTICLE
Abstract: The ras GTPase-activating protein (GAP), identified and characterized in mammalian cells, stimulates the intrinsic GTPase activity of ras proteins. We have previously proposed that the IRA genes, negative regulators of RAS genes in Saccharomyces cerevisiae, encode yeast homologs of the mammalian GAP. In this paper, we present

the following evidence that a product of the IRA2 gene exhibits GAP activity similar to that of the mammalian GAP protein. (i) Extracts of yeast cells overexpressing IRA2 stimulated the GTPase activity of the yeast RAS2 protein. (ii) An epitope for a monoclonal antibody (12CA5) was added to the N terminus of the IRA2 protein. The GAP activity of extracts prepared from cells expressing this fusion protein was shown to be immunoprecipitable by 12CA5. (iii) An IRA2 protein fused to glutathione S-transferase (GST) was produced and partially purified from Escherichia coli cells. GAP activity was detected with this purified GST-IRA2 fusion protein. (iv) The GAP activity of IRA2 proteins described above did not stimulate the GTPase activity of the RAS2Val19 protein, a protein having an amino acid alteration analogous to that found in mammalian oncogenic ras proteins. This result parallels studies showing that mammalian GAP is incapable of stimulating the GTPase activity of mammalian oncogenic proteins. The remarkable conservation between the GAP activity in mammalian and yeast cells supports the idea that the function of GAP is to negatively regulate ras proteins in mammalian cells.

1/7/177
10595272 Genuine Article#: EQ625 Number of References: 37
Title: SITE-DIRECTED MUTAGENESIS OF LYSINE WITHIN THE IMMUNODOMINANT AUTOEPITOPE OF PDC-E2
Author(s): LEUNG PSC; IWAYAMA T; COPPEL RL; GERSHWIN ME
Corporate Source: UNIV CALIF DAVIS,DIV RHEUMATOL ALLERGY & CLIN IMMUNOL,TB 192/DAVIS//CA/95616; UNIV CALIF DAVIS,DIV RHEUMATOL ALLERGY & CLIN IMMUNOL,TB 192/DAVIS//CA/95616; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: HEPATOLOGY, 1990, V12, N6, P1321-1328
Language: ENGLISH Document Type: ARTICLE
Abstract: The major autoantigens of PBC have been identified as the four closely related mitochrondrial enzymes PDC-E2, BCKD-E2 OGDC-E2 and protein X. A major structural similarity of these enzymes is the presence of one or more lipoyl domains. The immunodominant epitope of each autoantigen has either been postulated or been demonstrated to be located within the lipoate binding region. However, it is not clear whether the binding of lipoic acid to the epitope is necessary for autoantibody recognition. To address this issue we have constructed by oligonucleotide site-directed mutatagenesis three mutants in the lipoyl domain of human PDC-E2. Because lipoic acid is covalently bound to the xi-amino group of the lysine residue of PDC-E2, the mutants were designed to replace the lysine residue in the lipoyl domain with glutamine, a negatively charged amino acid; histidine, a positively charged amino acid; and tyrosine, an aromatic amino acid. Binding reactivity of sera from patients with PBC were analyzed by enzyme-linked immunosorbent assay, immunoblotting and specific absorption against each of the three mutants and control clones. All data were compared with parallel studies with a control recombinant clone, the liver-specific F alloantigen. We believe the recognition of the lipoyl domain is a reflection of the surface-exposed, hydrophilic and relatively mobile nature of this region of the autoantigen. Further studies on direct assay for the presence of lipoic acid will be needed to clarify these issues.

1/7/178
10592396 Genuine Article#: EQ008 Number of References: 28
Title: EXPRESSION OF RECOMBINANT HUMAN GLUCOSE-DEPENDENT INSULINOTROPIC POLYPEPTIDE IN ESCHERICHIA-COLI BY SEQUENCE-SPECIFIC PROTEOLYSIS OF A

PROTEIN-A FUSION PROTEIN
Author(s): CHOW BKC; MORROW GW; HO M; PEDERSON RA; MCINTOSH CHS; BROWN JC; MACGILLIVRAY RTA
Corporate Source: UNIV BRITISH COLUMBIA,DEPT BIOCHEM,2146 HLTH SCI MALL/VANCOUVER V6T 1W5/BC/CANADA/; UNIV BRITISH COLUMBIA,DEPT BIOCHEM,2146 HLTH SCI MALL/VANCOUVER V6T 1W5/BC/CANADA/; UNIV BRITISH COLUMBIA,DEPT PHYSIOL,MRC,REGULATORY PEPTIDE GRP/VANCOUVER V6T 1W5/BC/CANADA/
Journal: PEPTIDES, 1990, V11, N6, P1069-1074
Language: ENGLISH Document Type: ARTICLE
Abstract: Glucose-dependent insulinotropic polypeptide (GIP) is a forty-two amino acid hormone that stimulates the secretion of insulin from the pancreatic B-cells in the presence of elevated glucose concentrations. The human GIP gene with the human A-alpha-fibrinopeptide sequence was synthesized and linked to the Staphylococcus aureus protein A gene in the vector pRIT2T. This plasmid was expressed in Escherichia coli, and the resulting fusion protein consisted of three domains: protein A for ease of purification, fibrinopeptide sequence for thrombin cleavage and human GIP. The GIP was subsequently cleaved from the fusion protein with alpha-thrombin. The identity of the recombinant human GIP was confirmed by SDS-PAGE, ELISA, HPLC and amino-terminal amino acid sequence analysis. This recombinant product was shown to have comparable insulinotropic activity to porcine GIP in the isolated perfused pancreas.

1/7/179
10584170 Genuine Article#: EP751 Number of References: 64
Title: CLONING AND SEQUENCE OF THE GENE FOR HEAT-SHOCK PROTEIN-60 FROM CHLAMYDIA-TRACHOMATIS AND IMMUNOLOGICAL REACTIVITY OF THE PROTEIN
Author(s): CERRONE MC; MA JJ; STEPHENS RS
Corporate Source: UNIV CALIF SAN FRANCISCO,DEPT PHARMACEUT CHEM/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT PHARMACEUT CHEM/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,MED LAB/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,FRANCIS I PROCTOR FDN/SAN FRANCISCO//CA/94143
Journal: INFECTION AND IMMUNITY, 1991, V59, N1, P79-90
Language: ENGLISH Document Type: ARTICLE
Abstract: We isolated and sequenced the gene for the chlamydial heat shock protein 60 (HSP-60) from a Chlamydia trachomatis genomic library by molecular genetic methods. The DNA sequence derived revealed an operon-like gene structure with two open reading frames encoding an 11,122- and a 57,956-Da protein. The translated amino acid sequence of the larger open reading frame showed a high degree of homology with known sequences for HSP-60 from several bacterial species as well as with plant and human sequences. By using the determined nucleotide sequence, fragments of the gene were cloned into the plasmid vector pGEX for expression as fusion proteins consisting of glutathione S-transferase and peptide portions of the chlamydial HSP-60. HSP-60 antigenic identity was confirmed by an immunoblot with anti-HSP-60 rabbit serum. Sera from patients that exhibited both high antichlamydial titers and reactivity to chlamydial HSP-60 showed reactivity on immunoblots to two fusion proteins that repesented portions of the carboxyl-terminal half of the molecule, whereas fusion proteins defining the amino-terminal half were nonreactive. No reactivity with the fusion proteins was seen with sera from patients that had been previously screened as nonreactive to native chlamydial HSP-60 but which had high antichlamydial titers. Sera from noninfected control subjects also exhibited no reactivity. Definition of

recognized HSP-60 epitopes may provide a predictive screen for those patients with C. trachomatis infections who may develop damaging sequelae, as well as providing tools for the study of immunopathogenic mechanisms of Chlamydia-induced disease.

1/7/180
10583278 Genuine Article#: EQ223 Number of References: 48
Title: IDENTIFICATION OF VIMENTIN AND NOVEL VIMENTIN-RELATED PROTEINS IN XENOPUS OOCYTES AND EARLY EMBRYOS
Author(s): TORPEY NP; HEASMAN J; WYLIE CC
Corporate Source: UNIV CAMBRIDGE,DEPT ZOOL,DOWNING ST/CAMBRIDGE CB2 3EJ//ENGLAND/
Journal: DEVELOPMENT, 1990, V110, N4, P1185-1195
Language: ENGLISH Document Type: ARTICLE
Abstract: We have made antibodies against fusion proteins of Xenopus vimentin. We show for the first time the distribution of vimentin in larval stages, where it is found in cells of mesenchymal origin, and in radial glial cells. In sections of Xenopus oocytes and early embryos, immunocytochemistry reveals the presence of an extensive cytoplasmic network, distributed in an animal-vegetal gradient. Germ plasm stains particularly strongly. The form of the IF proteins in this network is unusual. In immunoblot experiments the anti-vimentin antibodies detect a number of distinct proteins. We have identified those that are the products of the two known vimentin genes, by injection of synthetic mRNA transcribed from cloned vimentin cDNAs into oocytes, followed by two-dimensional Western blotting. This has demonstrated unambiguously that one Xenopus vimentin, Vim1, is present in oocytes and early embryos. However, two other immunoreactive proteins detected in Triton extracts of oocytes and early embryos are not the products of Vim1, since depletion of vimentin mRNA by antisense oligonucletide injection has no effect on the synthesis of these proteins. These results suggest that novel IF-like proteins are expressed in Xenopus oocytes and early embryos.

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10574152 Genuine Article#: EP243 Number of References: 57
Title: ALTERNATIVE SPLICING OF ENDOTHELIAL-CELL FIBRONECTIN MESSENGER-RNA IN THE IIICS REGION - FUNCTIONAL-SIGNIFICANCE
Author(s): KOCHER O; KENNEDY SP; MADRI JA
Corporate Source: YALE UNIV,SCH MED,DEPT PATHOL,310 CEDAR ST/NEW HAVEN//CT/06510; YALE UNIV,SCH MED,DEPT PATHOL,310 CEDAR ST/NEW HAVEN//CT/06510
Journal: AMERICAN JOURNAL OF PATHOLOGY, 1990, V137, N6, P1509-1524
Language: ENGLISH Document Type: ARTICLE
Abstract: Transforming growth factor-beta-1 (TGF-beta-1) is thought to play a role in modulating vascular cell function in vivo. In vitro, it decreases endothelial cell proliferation and migration. We postulated that these biologic activities could be mediated through TGF-beta-1 modulation of specific gene expression. Therefore we differentially screened a human umbilical vein endothelial cell cDNA library with cDNAs prepared from both untreated and TGF-beta-1-treated bovine aortic endothelial cells. Using this technique, we isolated many TGF-beta-1-induced cDNA clones. Sequence analysis of these cDNAs showed that many of them corresponded to alternatively spliced fibronectin mRNAs. These fibronectin clones all contained the extradomain I (ED I) but three different forms of the type III connecting segment (IIICS). These different fibronectin cDNAs were expressed in bacteria and the recombinant proteins used to study the

effects of IIICS alternative splicing on cell attachment, spreading, and migration in bovine aortic endothelial and smooth muscle cells and B16F10 melanoma cells. The results of these experiments show that attachment and spreading of bovine aortic endothelial and smooth muscle cells depend primarily on the presence of the Arg-Gly-Asp-Ser (RGDS) sequence in the recombinant fibronectin proteins. However attachment and spreading of bovine aortic endothelial cells are modulated by alternative splicing in the IIICS region. Specifically splicing of the IIICS region decreases spreading and increases migration rates of the endothelial cells. On the contrary, using a cell line (B16F10 melanoma cells) that is known not to require the RGDS sequence for adhesion confirmed previous findings that B16F10 melanoma cells do not require the presence of the RGDS sequence for attachment and spreading. Indeed B16F10 cells were able to attach and spread on two recombinant proteins that did not contain the RGDS sequence. However attachment and spreading of B16F10 were dramatically inhibited when a 75-base pair DNA fragment was removed from the 5 end of the IIICS region. These results suggest that various regions of the fibronectin molecule may be able to interact with different cell populations to promote cell attachment and spreading, and that alternative splicing may modulate this process.

1/7/182
10559814 Genuine Article#: EP049 Number of References: 25
Title: LOCALIZATION OF DYSTROPHIN TO POSTSYNAPTIC REGIONS OF CENTRAL-NERVOUS-SYSTEM CORTICAL-NEURONS
Author(s): LIDOV HGW; BYERS TJ; WATKINS SC; KUNKEL LM
Corporate Source: CHILDRENS HOSP MED CTR,DEPT PATHOL/BOSTON//MA/02115; CHILDRENS HOSP MED CTR,DEPT NEUROL/BOSTON//MA/02115; BRIGHAM & WOMENS HOSP,DEPT PATHOL/BOSTON//MA/02115; BRIGHAM & WOMENS HOSP,DEPT NEUROL/BOSTON//MA/02115; HARVARD UNIV,SCH MED,DEPT PATHOL/BOSTON//MA/02115; HARVARD UNIV,SCH MED,DEPT NEUROL/BOSTON//MA/02115; CHILDRENS HOSP MED CTR,HOWARD HUGHES MED INST/BOSTON//MA/02115; HARVARD UNIV,SCH MED,DANA FARBER CANC INST,ELECTRON MICROSCOPY LAB/BOSTON//MA/02115
Journal: NATURE, 1990, V348, N6303, P725-727
Language: ENGLISH Document Type: ARTICLE

1/7/183
10558232 Genuine Article#: EN159 Number of References: 26
Title: MOLECULAR-CLONING OF THE GENE FOR THE HUMAN PLACENTAL GTP-BINDING PROTEIN-GP (G25K) - IDENTIFICATION OF THIS GTP-BINDING PROTEIN AS THE HUMAN HOMOLOG OF THE YEAST CELL-DIVISION-CYCLE PROTEIN-CDC42
Author(s): SHINJO K; KOLAND JG; HART MJ; NARASIMHAN V; JOHNSON DI; EVANS T; CERIONE RA
Corporate Source: CORNELL UNIV,DEPT PHARMACOL,SCHURMAN HALL/ITHACA//NY/14850; CORNELL UNIV,DEPT BIOCHEM CELL & MOLEC BIOL/ITHACA//NY/14850; UNIV VERMONT,DEPT MICROBIOL & MOLEC GENET/BURLINGTON//VT/05405; GENENTECH INC,DEPT DEV BIOL/SAN FRANCISCO//CA/94080
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1990, V87, N24, P9853-9857
Language: ENGLISH Document Type: ARTICLE

1/7/184
10555271 Genuine Article#: EM821 Number of References: 27
Title: THE DIAGNOSTIC-VALUE AND MOLECULAR CHARACTERIZATION OF AN ECHINOCOCCUS-MULTILOCULARIS ANTIGEN GENE CLONE
Author(s): HEMMINGS L; MCMANUS DP

Corporate Source: UNIV LEICESTER,DEPT BIOCHEM,ADRIAN BLDG/LEICESTER LE1 7RH//ENGLAND/; IMPERIAL COLL SCI TECHNOL & MED,DEPT PURE & APPL BIOL/LONDON//ENGLAND/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1991, V44, N1, P53-61
Language: ENGLISH Document Type: ARTICLE

1/7/185
10555270 Genuine Article#: EM821 Number of References: 24
Title: VACCINATION AGAINST TAENIA-TAENIAEFORMIS INFECTION IN RATS USING A RECOMBINANT PROTEIN AND PRELIMINARY-ANALYSIS OF THE INDUCED ANTIBODY-RESPONSE
Author(s): ITO A; BOGH HO; LIGHTOWLERS MW; MITCHELL GF; TAKAMI T; KAMIYA M; ONITAKE K; RICKARD MD
Corporate Source: GIFU UNIV,SCH MED,DEPT PARASITOL/GIFU 500//JAPAN/; CSIRO,DIV ANIM HLTH/MELBOURNE/VIC 3001/AUSTRALIA/; WALTER & ELIZA HALL INST MED RES/MELBOURNE//AUSTRALIA/; HOKKAIDO UNIV,FAC VET MED,DEPT PARASITOL/SAPPORO/HOKKAIDO 060/JAPAN/; GIFU UNIV,SCH MED,DEPT PATHOL/GIFU 500//JAPAN/; UNIV MELBOURNE,CTR VET CLIN/WERRIBEE/VIC 3030/AUSTRALIA/; YAMAGATA UNIV,FAC SCI,DEPT BIOL/YAMAGATA 990//JAPAN/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1991, V44, N1, P43-49
Language: ENGLISH Document Type: ARTICLE

1/7/186
10550953 Genuine Article#: EM576 Number of References: 35
Title: T-CELL EPITOPES ON THE 70-KDA PROTEIN OF THE (U1)RNP COMPLEX IN AUTOIMMUNE RHEUMATOLOGIC DISORDERS
Author(s): OBRIEN RM; CRAM DS; COPPEL RL; HARRISON LC
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,BURNET CLIN RES UNIT/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF AUTOIMMUNITY, 1990, V3, N6, P747-757
Language: ENGLISH Document Type: ARTICLE

1/7/187
10538176 Genuine Article#: EL759 Number of References: 48
Title: CYCLIN ACTIVATION OF P34CDC2
Author(s): SOLOMON MJ; GLOTZER M; LEE TH; PHILIPPE M; KIRSCHNER MW
Corporate Source: UNIV CALIF SAN FRANCISCO,DEPT BIOCHEM & BIOPHYS/SAN FRANCISCO//CA/94143; UNIV RENNES 1,BIOL & GENET DEV LAB/F-35042 RENNES//FRANCE/
Journal: CELL, 1990, V63, N5, P1013-1024
Language: ENGLISH Document Type: ARTICLE

1/7/188
10537924 Genuine Article#: EL450 Number of References: 19
Title: BACTERIAL EXPRESSION OF HUMAN MUSCARINIC RECEPTOR FUSION PROTEINS AND GENERATION OF SUBTYPE-SPECIFIC ANTISERA
Author(s): LEVEY AI; STORMANN TM; BRANN MR
Corporate Source: JOHNS HOPKINS UNIV HOSP,DEPT NEUROL,509 PATHOL BLDG,600 N WOLFE ST/BALTIMORE//MD/21205; NINCDS,MOLEC BIOL LAB/BETHESDA//MD/20892; JOHNS HOPKINS UNIV,SCH MED,DEPT NEUROL/BALTIMORE//MD/21205; JOHNS HOPKINS UNIV,SCH MED,DEPT PATHOL/BALTIMORE//MD/21205
Journal: FEBS LETTERS, 1990, V275, N1-2, P65-69
Language: ENGLISH Document Type: ARTICLE

1/7/189
10532940 Genuine Article#: EL283 Number of References: 14
Title: HUMAN-ANTIBODY RESPONSE TO THE NUCLEOSIDE TRIPHOSPHATE HYDROLASE OF TOXOPLASMA-GONDII

Author(s): TENTER AM; JOHNSON AM
Corporate Source: FLINDERS UNIV,SCH MED,FLINDERS MED CTR,DEPT CLIN MICROBIOL/BEDFORD PK/SA 5042/AUSTRALIA/
Journal: JOURNAL OF IMMUNOASSAY, 1990, V11, N4, P579-590
Language: ENGLISH Document Type: ARTICLE

1/7/190
10531504 Genuine Article#: EL229 Number of References: 59
Title: ISOLATION OF AN ABDOMINAL-A GENE FROM THE LOCUST SCHISTOCERCA-GREGARIA AND ITS EXPRESSION DURING EARLY EMBRYOGENESIS
Author(s): TEAR G; AKAM M; MARTINEZARIAS A
Corporate Source: UNIV CAMBRIDGE,DEPT GENET,DOWNING ST/CAMBRIDGE CB2 3EH//ENGLAND/; UNIV CAMBRIDGE,DEPT ZOOL/CAMBRIDGE CB2 3EJ//ENGLAND/
Journal: DEVELOPMENT, 1990, V110, N3, P915&
Language: ENGLISH Document Type: ARTICLE

1/7/191
10529183 Genuine Article#: EK975 Number of References: 22
Title: A RECOMBINANT ANTIGEN WITH POTENTIAL FOR SERODIAGNOSIS OF ECHINOCOCCUS-GRANULOSUS INFECTION IN DOGS
Author(s): GASSER RB; LIGHTOWLERS MW; RICKARD MD
Corporate Source: UNIV MELBOURNE,VET CLIN CTR,PRINCES HIGHWAY/WERRIBEE/VIC 3030/AUSTRALIA/
Journal: INTERNATIONAL JOURNAL FOR PARASITOLOGY, 1990, V20, N7, P943-950
Language: ENGLISH Document Type: ARTICLE

1/7/192
10519628 Genuine Article#: EK391 Number of References: 39
Title: MAPPING OF EPITOPES ON THE LA(SS-B) AUTOANTIGEN OF PRIMARY SJOGRENS-SYNDROME - IDENTIFICATION OF A CROSS-REACTIVE EPITOPE
Author(s): MCNEILAGE LJ; MACMILLAN EM; WHITTINGHAM SF
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,BURNET CLIN RES UNIT,PO/PARKVILLE/VIC 3050/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,BURNET CLIN RES UNIT,PO/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF IMMUNOLOGY, 1990, V145, N11, P3829-3835
Language: ENGLISH Document Type: ARTICLE

1/7/193
10514350 Genuine Article#: EJ011 Number of References: 48
Title: A HIGHLY CONSERVED ENHANCER DOWNSTREAM OF THE HUMAN MLC1/3 LOCUS IS A TARGET FOR MULTIPLE MYOGENIC DETERMINATION FACTORS
Author(s): ROSENTHAL N; BERGLUND EB; WENTWORTH BM; DONOGHUE M; WINTER B; BOBER E; BRAUN T; ARNOLD HH
Corporate Source: BOSTON UNIV,SCH MED,DEPT BIOCHEM/BOSTON//MA/02118; BOSTON UNIV,SCH MED,DEPT BIOCHEM/BOSTON//MA/02118; UNIV HAMBURG,SCH MED,DEPT TOXICOL/D-2000 HAMBURG 13//FED REP GER/
Journal: NUCLEIC ACIDS RESEARCH, 1990, V18, N21, P6239-6246
Language: ENGLISH Document Type: ARTICLE

1/7/194
10510030 Genuine Article#: EJ590 Number of References: 26
Title: THE CATALYTIC DOMAIN OF THE NEUROFIBROMATOSIS TYPE-1 GENE-PRODUCT STIMULATES RAS GTPASE AND COMPLEMENTS IRA MUTANTS OF SACCHAROMYCES-CEREVISIAE
Author(s): XU GF; LIN B; TANAKA K; DUNN D; WOOD D; GESTELAND R; WHITE R; WEISS R; TAMANOI F
Corporate Source: UNIV UTAH,SCH MED,HOWARD HUGHES MED INST/SALT LAKE

CITY//UT/84132; UNIV UTAH,SCH MED,DEPT HUMAN GENET/SALT LAKE CITY//UT/84132; UNIV CHICAGO,DEPT BIOCHEM & MOLEC BIOL/CHICAGO//IL/60637
Journal: CELL, 1990, V63, N4, P835-841
Language: ENGLISH Document Type: ARTICLE

1/7/195
10509997 Genuine Article#: EJ355 Number of References: 32
Title: ANTIGENIC ANALYSIS OF GROUP-I HOUSE DUST MITE ALLERGENS USING RANDOM FRAGMENTS OF DER-P-I EXPRESSED BY RECOMBINANT-DNA LIBRARIES
Author(s): GREENE WK; CHUA KY; STEWART GA; THOMAS WR
Corporate Source: PRINCESS MARGARET HOSP,CLIN IMMUNOL RES UNIT,THOMAS ST/SUBIACO 6008//AUSTRALIA/; PRINCESS MARGARET HOSP,CLIN IMMUNOL RES UNIT/SUBIACO//AUSTRALIA/
Journal: INTERNATIONAL ARCHIVES OF ALLERGY AND APPLIED IMMUNOLOGY, 1990, V 92, N1, P30-38
Language: ENGLISH Document Type: ARTICLE

1/7/196
10509234 Genuine Article#: EJ602 Number of References: 40
Title: A CLONED HUMAN CCAAT-BOX-BINDING FACTOR STIMULATES TRANSCRIPTION FROM THE HUMAN HSP70 PROMOTER
Author(s): LUM LSY; SULTZMAN LA; KAUFMAN RJ; LINZER DIH; WU BJ
Corporate Source: NORTHWESTERN UNIV,DEPT BIOCHEM MOLEC BIOL & CELL BIOL/EVANSTON//IL/60208; NORTHWESTERN UNIV,DEPT BIOCHEM MOLEC BIOL & CELL BIOL/EVANSTON//IL/60208; GENET INST/CAMBRIDGE//MA/02140
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1990, V10, N12, P6709-6717
Language: ENGLISH Document Type: ARTICLE

1/7/197
10501823 Genuine Article#: EJ581 Number of References: 26
Title: SEQUENCE-SPECIFIC DNA-BINDING BY THE C-MYC PROTEIN
Author(s): BLACKWELL TK; KRETZNER L; BLACKWOOD EM; EISENMAN RN; WEINTRAUB H
Corporate Source: FRED HUTCHINSON CANC RES CTR,HOWARD HUGHES MED INST,DIV BASIC SCI,1124 COLUMBIA ST/SEATTLE//WA/98104
Journal: SCIENCE, 1990, V250, N4984, P1149-1151
Language: ENGLISH Document Type: ARTICLE

1/7/198
10501812 Genuine Article#: EJ581 Number of References: 67
Title: AN ESCHERICHIA-COLI RIBONUCLEOPROTEIN CONTAINING 4.5S RNA RESEMBLES MAMMALIAN SIGNAL RECOGNITION PARTICLE
Author(s): PORITZ MA; BERNSTEIN HD; STRUB K; ZOPF D; WILHELM H; WALTER P
Corporate Source: UNIV CALIF SAN FRANCISCO,SCH MED,DEPT BIOCHEM &BIOPHYS/SAN FRANCISCO//CA/94143
Journal: SCIENCE, 1990, V250, N4984, P1111-1117
Language: ENGLISH Document Type: ARTICLE

1/7/199
10496590 Genuine Article#: EH189 Number of References: 18
Title: AN M13 VECTOR LIBRARY FOR CLONING DNA WITH 4 NUCLEOTIDE 3′ OVERHANGS
Author(s): PANCHMATIA FK; CRAMB EM; LI V; ALLEN FL; GLICKMAN BW; WAYE MMY
Corporate Source: UNIV TORONTO,FAC DENT,MRC,PERIODONTAL PHYSIOL GRP/TORONTO M5S 1A8/ONTARIO/CANADA/; UNIV TORONTO,FAC DENT,MRC,PERIODONTAL PHYSIOL GRP/TORONTO M5S 1A8/ONTARIO/CANADA/; YORK UNIV,DEPT BIOL/DOWNSVIEW M3J 1P3/ONTARIO/CANADA/
Journal: PLASMID, 1990, V24, N1, P68-73
Language: ENGLISH Document Type: ARTICLE

1/7/200
10484739 Genuine Article#: EG011 Number of References: 30
Title: PRODUCTION OF RAT RENIN FUSION PROTEIN IN ESCHERICHIA-COLI AND THE PREPARATION OF RENIN-SPECIFIC ANTISERA
Author(s): CAMPBELL DJ; VALENTIJN AJ; BERKA JLA
Corporate Source: ST VINCENTS INST MED RES,41 VICTORIA PARADE/FITZROY/VIC 3065/AUSTRALIA/; UNIV MELBOURNE,DEPT ANAT/PARKVILLE/VIC 3052/AUSTRALIA/
Journal: MOLECULAR AND CELLULAR ENDOCRINOLOGY, 1990, V73, N2-3, P83-91
Language: ENGLISH Document Type: ARTICLE

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10475054 Genuine Article#: EF619 Number of References: 63
Title: MOLECULAR-BIOLOGY OF RYE-GRASS POLLEN ALLERGENS
Author(s): SINGH MB; SMITH PM; KNOX RB
Corporate Source: UNIV MELBOURNE,SCH BOT/PARKVILLE/VIC 3052/AUSTRALIA/
Journal: MONOGRAPHS IN ALLERGY, 1990, V28, P101-120
Language: ENGLISH Document Type: ARTICLE

1/7/202
10443249 Genuine Article#: EC874 Number of References: 27
Title: THE PAX PLASMIDS - NEW GENE-FUSION VECTORS FOR SEQUENCING, MUTAGENESIS AND EXPRESSION OF PROTEINS IN ESCHERICHIA-COLI
Author(s): MARKMEYER P; RUHLMANN A; ENGLISCH U; CRAMER F
Corporate Source: MAX PLANCK INST EXPTL MED,CHEM ABT,HERMANN REINSTR 3/D-3400 GOTTINGEN//FED REP GER/; MAX PLANCK INST EXPTL MED,CHEM ABT,HERMANN REINSTR 3/D-3400 GOTTINGEN//FED REP GER/
Journal: GENE, 1990, V93, N1, P129-134
Language: ENGLISH Document Type: NOTE

1/7/203
10443168 Genuine Article#: EC630 Number of References: 78
Title: THE DROSOPHILA NEUROGENIC LOCUS MASTERMIND ENCODES A NUCLEAR-PROTEIN UNUSUALLY RICH IN AMINO-ACID HOMOPOLYMERS
Author(s): SMOLLER D; FRIEDEL C; SCHMID A; BETTLER D; LAM L; YEDVOBNICK B
Corporate Source: EMORY UNIV,DEPT BIOL/ATLANTA//GA/30322; EMORY UNIV,DEPT BIOL/ATLANTA//GA/30322
Journal: GENES & DEVELOPMENT, 1990, V4, N10, P1688-1700
Language: ENGLISH Document Type: ARTICLE

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10431283 Genuine Article#: EC535 Number of References: 17
Title: AN IMPROVED ELISA FOR THE DETECTION OF ANTIBODIES AGAINST BABESIA-BOVIS USING EITHER A NATIVE OR A RECOMBINANT BABESIA-BOVIS ANTIGEN
Author(s): BOSE R; JACOBSON RH; GALE KR; WALTISBUHL DJ; WRIGHT IG
Corporate Source: CSIRO,DIV TROP ANIM PROD,LONG POCKET LABS,PRIVATE MAIL BAG 3/INDOOROOPILLY/QLD 4068/AUSTRALIA/; CORNELL UNIV,COLL VET MED/ITHACA//NY/14853
Journal: PARASITOLOGY RESEARCH, 1990, V76, N8, P648-652
Language: ENGLISH Document Type: ARTICLE

1/7/205
10428316 Genuine Article#: EB775 Number of References: 11
Title: IDENTIFICATION OF THE GENE FOR A PLASMODIUM-YOELII RHOPTRY PROTEIN - MULTIPLE COPIES IN THE PARASITE GENOME
Author(s): KEEN J; HOLDER A; PLAYFAIR J; LOCKYER M; LEWIS A
Corporate Source: NATL INST MED RES,DIV PARASITOL,MILL HILL/LONDON NW7 1AA//ENGLAND/; WELLCOME BIOTECH,DEPT MOLEC BIOL/BECKENHAM//ENGLAND/;

UNIV COLL & MIDDLESEX SCH MED,DEPT IMMUNOL/LONDON//ENGLAND/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1990, V42, N2, P241-246
Language: ENGLISH Document Type: ARTICLE

1/7/206
10410825 Genuine Article#: EA406 Number of References: 30
Title: CYSTEINE-RICH OUTER-MEMBRANE PROTEINS OF CHLAMYDIA-TRACHOMATIS DISPLAY COMPENSATORY SEQUENCE CHANGES BETWEEN BIOVARIANTS
Author(s): ALLEN JE; CERRONE MC; BEATTY PR; STEPHENS RS
Corporate Source: UNIV CALIF BERKELEY,DEPT BIOMED & ENVIRONM HLTHSCI/BERKELEY//CA/94720; UNIV CALIF BERKELEY,DEPT BIOMED & ENVIRONM HLTHSCI/BERKELEY//CA/94720; UNIV CALIF SAN FRANCISCO,DEPT PHARMACEUT CHEM/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT LAB MED/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,FRANCIS I PROCTOR FDN/SAN FRANCISCO//CA/94143
Journal: MOLECULAR MICROBIOLOGY, 1990, V4, N9, P1543-1550
Language: ENGLISH Document Type: ARTICLE

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10403164 Genuine Article#: EA353 Number of References: 43
Title: PHOSPHORYLATION OF THE PDGF RECEPTOR BETA-SUBUNIT CREATES A TIGHT-BINDING SITE FOR PHOSPHATIDYLINOSITOL-3 KINASE
Author(s): KAZLAUSKAS A; COOPER JA
Corporate Source: FRED HUTCHINSON CANC RES CTR,DEPT CELL BIOL,1124 COLUMBIA ST/SEATTLE//WA/98104
Journal: EMBO JOURNAL, 1990, V9, N10, P3279-3286
Language: ENGLISH Document Type: ARTICLE

1/7/208
10388868 Genuine Article#: DZ195 Number of References: 20
Title: ROLE OF THE ZINC(II) IONS IN THE STRUCTURE OF THE 3-FINGER DNA-BINDING DOMAIN OF THE SP1 TRANSCRIPTION FACTOR
Author(s): KUWAHARA J; COLEMAN JE
Corporate Source: YALE UNIV,DEPT MOLEC BIOPHYS & BIOCHEM/NEW HAVEN//CT/06510; YALE UNIV,DEPT MOLEC BIOPHYS & BIOCHEM/NEW HAVEN//CT/06510
Journal: BIOCHEMISTRY, 1990, V29, N37, P8627-8631
Language: ENGLISH Document Type: ARTICLE

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10383780 Genuine Article#: DZ452 Number of References: 55
Title: MOLECULAR-CLONING OF THE MICROTUBULE-ASSOCIATED MECHANOCHEMICAL ENZYME DYNAMIN REVEALS HOMOLOGY WITH A NEW FAMILY OF GTP-BINDING PROTEINS
Author(s): OBAR RA; COLLINS CA; HAMMARBACK JA; SHPETNER HS; VALLEE RB
Corporate Source: WORCESTER FDN EXPTL BIOL INC,CELL BIOL GRP,222 MAPLE AVE/SHREWSBURY//MA/01545; NORTHWESTERN UNIV,SCH MED,DEPT CELL MOLEC & STRUCT BIOL/CHICAGO//IL/60611
Journal: NATURE, 1990, V347, N6290, P256-261
Language: ENGLISH Document Type: ARTICLE

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10376075 Genuine Article#: DY100 Number of References: 55
Title: THE DNA-BINDING SUBUNIT OF NF-KAPPA-B IS IDENTICAL TO FACTOR KBF1 AND HOMOLOGOUS TO THE REL ONCOGENE PRODUCT
Author(s): KIERAN M; BLANK V; LOGEAT F; VANDEKERCKHOVE J; LOTTSPEICH F; LEBAIL O; URBAN MB; KOURILSKY P; BAEUERLE PA; ISRAEL A
Corporate Source: MONTREAL CHILDRENS HOSP,2300 TUPPER AVE/MONTREAL H3H

1P3/QUEBEC/CANADA/; INST PASTEUR,CNRS,UAC 115,INSERM,U277,UNITE BIOL MOLEC GENE/F-75724 PARIS 15//FRANCE/; STATE UNIV GHENT,GENET LAB/B-9000 GHENT//BELGIUM/; MAX PLANCK INST BIOCHEM,GENZENTRUM/D-8033 MARTINSRIED//FED REP GER/; UNIV MUNICH,MOLEK BIOL LAB/D-8033 MARTINSRIED//FED REP GER/
Journal: CELL, 1990, V62, N5, P1007-1018
Language: ENGLISH Document Type: ARTICLE

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10369903 Genuine Article#: DX239 Number of References: 71
Title: EVOLUTION AND MOLECULAR-BIOLOGY OF LUTEOVIRUSES
Author(s): MARTIN RR; KEESE PK; YOUNG MJ; WATERHOUSE PM; GERLACH WL
Corporate Source: CSIRO,DIV PLANT IND,BLACK MT 2605/CANBERRA/ACT 2601/AUSTRALIA/
Journal: ANNUAL REVIEW OF PHYTOPATHOLOGY, 1990, V28, P341-363
Language: ENGLISH Document Type: ARTICLE

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10323283 Genuine Article#: DU727 Number of References: 31
Title: CDNA SEQUENCE-ANALYSIS OF A 29-KDA CYSTEINE-RICH SURFACE-ANTIGEN OF PATHOGENIC ENTAMOEBA-HISTOLYTICA
Author(s): TORIAN BE; FLORES BM; STROEHER VL; HAGEN FS; STAMM WE
Corporate Source: LOUISIANA STATE UNIV,MED CTR,DEPT MICROBIOL IMMUNOL & PARASITOL/NEW ORLEANS//LA/70112; UNIV WASHINGTON,HARBORVIEW MED CTR,DEPT MED/SEATTLE//WA/98104; UNIV WASHINGTON,DEPT BIOL STRUCT/SEATTLE//WA/98195; ZYMOGENET INC/SEATTLE//WA/98105
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1990, V87, N16, P6358-6362
Language: ENGLISH Document Type: ARTICLE

1/7/213
10301667 Genuine Article#: DR491 Number of References: 70
Title: IMMUNOLOGY AND MOLECULAR-BIOLOGY OF ECHINOCOCCUS INFECTIONS
Author(s): LIGHTOWLERS MW
Corporate Source: UNIV MELBOURNE,CTR VET CLIN,PRINCES HIGHWAY/WERRIBEE/VIC 3030/AUSTRALIA/
Journal: INTERNATIONAL JOURNAL FOR PARASITOLOGY, 1990, V20, N4, P471-478
Language: ENGLISH Document Type: ARTICLE

1/7/214
10291241 Genuine Article#: DR201 Number of References: 44
Title: CHLAMYDIA-TRACHOMATIS RNA-POLYMERASE MAJOR SIGMA-SUBUNIT - SEQUENCE AND STRUCTURAL COMPARISON OF CONSERVED AND UNIQUE REGIONS WITH ESCHERICHIA-COLI SIGMA-70 AND BACILLUS-SUBTILIS SIGMA-43
Author(s): KOEHLER JE; BURGESS RR; THOMPSON NE; STEPHENS RS
Corporate Source: UNIV CALIF SAN FRANCISCO,DEPT MED,DIV INFECT DIS/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT MED,DIV CLIN PHARMACOL/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT MED,DIV EXPTL THERAPEUT/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT LAB MED/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,DEPT PHARMACEUT CHEM/SAN FRANCISCO//CA/94143; UNIV CALIF SAN FRANCISCO,FRANCIS I PROCTOR FDN/SAN FRANCISCO//CA/94143; UNIV WISCONSIN,MCARDLE LAB CANC RES/MADISON//WI/53706
Journal: JOURNAL OF BIOLOGICAL CHEMISTRY, 1990, V265, N22, P13206-13214
Language: ENGLISH Document Type: ARTICLE

1/7/215
10283927 Genuine Article#: DQ704 Number of References: 38

Title: THE MAJOR 85-KD SURFACE-ANTIGEN OF THE MAMMALIAN FORM OF TRYPANOSOMA-CRUZI IS ENCODED BY A LARGE HETEROGENEOUS FAMILY OF SIMULTANEOUSLY EXPRESSED GENES
Author(s): KAHN S; VANVOORHIS WC; EISEN H
Corporate Source: FRED HUTCHINSON CANC RES CTR,DEPT GENET,M-723,1124 COLUMBIA ST/SEATTLE//WA/98104; UNIV WASHINGTON,SCH MED,DEPT MED,DIV INFECT DIS/SEATTLE//WA/98195
Journal: JOURNAL OF EXPERIMENTAL MEDICINE, 1990, V172, N2, P589-597
Language: ENGLISH Document Type: ARTICLE

1/7/216
10277023 Genuine Article#: DP595 Number of References: 39
Title: MOLECULAR-CLONING AND EXPRESSION OF GLYCOGEN-SYNTHASE KINASE-3 FACTOR-A
Author(s): WOODGETT JR
Corporate Source: LUDWIG INST CANC RES,91 RIDING HOUSE ST/LONDON W1P 8BT//ENGLAND/
Journal: EMBO JOURNAL, 1990, V9, N8, P2431-2438
Language: ENGLISH Document Type: ARTICLE

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10274026 Genuine Article#: DP394 Number of References: 8
Title: A 2ND REGION RECOGNIZED BY THE PROTECTIVE MONOCLONAL-ANTIBODY 5C10/66 IN THE PRECURSOR TO THE MAJOR MEROZOITE SURFACE-ANTIGEN OF PLASMODIUM-CHABAUDI-ADAMI
Author(s): LEW AM; BECK DJ; THOMAS LM
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1990, V41, N2, P289-291
Language: ENGLISH Document Type: NOTE

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10273773 Genuine Article#: DP600 Number of References: 24
Title: DEVELOPMENTALLY REGULATED PROTEIN-TYROSINE KINASE GENES IN DICTYOSTELIUM-DISCOIDEUM
Author(s): TAN JL; SPUDICH JA
Corporate Source: STANFORD UNIV,MED CTR,SCH MED,DEPT CELL BIOL/STANFORD//CA/94305; STANFORD UNIV,MED CTR,SCH MED,DEPT CELL BIOL/STANFORD//CA/94305; STANFORD UNIV,MED CTR,SCH MED,DEPT DEV BIOL/STANFORD//CA/94305
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1990, V10, N7, P3578-3583
Language: ENGLISH Document Type: ARTICLE

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10265982 Genuine Article#: DN430 Number of References: 23
Title: DETECTION OF AUTOANTIBODIES TO RIBOSOMAL-P PROTEIN USING RECOMBINANT AUTOANTIGEN IN A QUANTITATIVE IMMUNOASSAY
Author(s): GORDON TP; JOVANOVICH SA; SYKES P; BRADLEY J; ROBERTSTHOMSON PJ
Corporate Source: DEPT CLIN IMMUNOL/BEDFORD PK/SA 5042/AUSTRALIA/; FLINDERS UNIV,MED CTR,DEPT CLIN HAEMATOL/BEDFORD PK/SA 5042/AUSTRALIA/
Journal: RHEUMATOLOGY INTERNATIONAL, 1990, V10, N3, P99-102
Language: ENGLISH Document Type: ARTICLE

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10262863 Genuine Article#: DM848 Number of References: 84
Title: SITE-SPECIFIC PROTEOLYSIS OF FUSION PROTEINS
Author(s): CARTER P
Corporate Source: GENENTECH INC,DEPT BIOMOLEC CHEM,460 POINT SAN BRUNO

BLVD/SAN FRANCISCO//CA/94080
Journal: ACS SYMPOSIUM SERIES, 1990, V427, P181-193
Language: ENGLISH Document Type: REVIEW

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10255424 Genuine Article#: DN531 Number of References: 30
Title: MAPPING OF MULTIPLE B-CELL EPITOPES ON THE 70-KILODALTON AUTOANTIGEN OF THE U1 RIBONUCLEOPROTEIN COMPLEX
Author(s): CRAM DS; FISICARO N; COPPEL RL; WHITTINGHAM S; HARRISON LC
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,BURNET CLIN RES UNIT/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF IMMUNOLOGY, 1990, V145, N2, P630-635
Language: ENGLISH Document Type: ARTICLE

1/7/222
10242341 Genuine Article#: DM155 Number of References: 25
Title: EFFECTS OF INJECTED LEUKEMIA INHIBITORY FACTOR ON HEMATOPOIETIC AND OTHER TISSUES IN MICE
Author(s): METCALF D; NICOLA NA; GEARING DP
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: BLOOD, 1990, V76, N1, P50-56
Language: ENGLISH Document Type: ARTICLE

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10239733 Genuine Article#: DM384 Number of References: 35
Title: EVIDENCE THAT THE HEAD OF KINESIN IS SUFFICIENT FOR FORCE GENERATION AND MOTILITY INVITRO
Author(s): YANG JT; SAXTON WM; STEWART RJ; RAFF EC; GOLDSTEIN LSB
Corporate Source: HARVARD UNIV,DEPT CELLULAR & DEV BIOL/CAMBRIDGE//MA/02138 ; HARVARD UNIV,DEPT CELLULAR & DEV BIOL/CAMBRIDGE//MA/02138; INDIANA UNIV,DEPT BIOL/BLOOMINGTON//IN/47405
Journal: SCIENCE, 1990, V249, N4964, P42-47
Language: ENGLISH Document Type: ARTICLE

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10207404 Genuine Article#: DJ095 Number of References: 56
Title: POSTERIOR LOCALIZATION OF VASA PROTEIN CORRELATES WITH, BUT IS NOT SUFFICIENT FOR, POLE CELL-DEVELOPMENT
Author(s): LASKO PF; ASHBURNER M
Corporate Source: MCGILL UNIV,DEPT BIOL/MONTREAL H3A 1B1/QUEBEC/CANADA/; UNIV CAMBRIDGE,DEPT GENET/CAMBRIDGE CB2 3EH//ENGLAND/
Journal: GENES & DEVELOPMENT, 1990, V4, N6, P905-921
Language: ENGLISH Document Type: ARTICLE

1/7/225
10193311 Genuine Article#: DG853 Number of References: 68
Title: RECOMBINANT AUTOANTIGENS
Author(s): WILLIAMS DG
Corporate Source: KENNEDY INST,DIV CLIN IMMUNOL,6 BUTE GARDENS/LONDON W6 7DW//ENGLAND/
Journal: ANNALS OF THE RHEUMATIC DISEASES, 1990, S1, P445-451
Language: ENGLISH Document Type: ARTICLE

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10166755 Genuine Article#: DE616 Number of References: 27
Title: CHARACTERIZATION OF A MYOSIN-LIKE ANTIGEN FROM ONCHOCERCA-VOLVULUS
Author(s): ERONDU NE; DONELSON JE

Corporate Source: UNIV IOWA,DEPT BIOCHEM,HOWARD HUGHES MED INST,300 ECKSTEIN MED RES BLDG/IOWA CITY//IA/52242; UNIV IOWA,DEPT BIOCHEM,HOWARD HUGHES MED INST,300 ECKSTEIN MED RES BLDG/IOWA CITY//IA/52242
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1990, V40, N2, P213-224
Language: ENGLISH Document Type: ARTICLE

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10165980 Genuine Article#: DE936 Number of References: 22
Title: EXPRESSION OF DERMATOPHAGOIDES-PTERONYSSINUS ALLERGEN, DER P-II, IN ESCHERICHIA-COLI AND THE BINDING-STUDIES WITH HUMAN IGE
Author(s): CHUA KY; DILWORTH RJ; THOMAS WR
Corporate Source: PRINCESS MARGARET HOSP,CLIN IMMUNOL RES UNIT,THOMAS ST/SUBIACO//AUSTRALIA/; PRINCESS MARGARET HOSP,CLIN IMMUNOL RES UNIT,THOMAS ST/SUBIACO//AUSTRALIA/
Journal: INTERNATIONAL ARCHIVES OF ALLERGY AND APPLIED IMMUNOLOGY, 1990, V 91, N2, P124-129
Language: ENGLISH Document Type: ARTICLE

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10138200 Genuine Article#: DC934 Number of References: 52
Title: MOLECULAR-INTERACTIONS BETWEEN THE PROTEIN PRODUCTS OF THE NEUROGENIC LOCI NOTCH AND DELTA, 2 EGF-HOMOLOGOUS GENES IN DROSOPHILA
Author(s): FEHON RG; KOOH PJ; REBAY I; REGAN CL; XU T; MUSKAVITCH MAT; ARTAVANISTSAKONAS S
Corporate Source: YALE UNIV,DEPT BIOL,DEPT CELL BIOL,HOWARD HUGHES MED INST/NEW HAVEN//CT/06511; INDIANA UNIV,DEPT BIOL/BLOOMINGTON//IN/47405
Journal: CELL, 1990, V61, N3, P523-534
Language: ENGLISH Document Type: ARTICLE

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10127055 Genuine Article#: DB889 Number of References: 37
Title: GLUTATHIONE TRANSFERASE IN HELMINTHS
Author(s): BROPHY PM; BARRETT J
Corporate Source: UNIV COLL ABERYSTWYTH,DEPT BIOL SCI/ABERYSTWYTHSY23 3DA/DYFED/WALES/
Journal: PARASITOLOGY, 1990, V100, APR, P345-349
Language: ENGLISH Document Type: REVIEW

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10111355 Genuine Article#: DB014 Number of References: 33
Title: LEISHMANIA-MAJOR - PRODUCTION OF RECOMBINANT GP63, ITS ANTIGENICITY AND IMMUNOGENICITY IN MICE
Author(s): HANDMAN E; BUTTON LL; MCMASTER RW
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; UNIV BRITISH COLUMBIA,DEPT MED GENET/VANCOUVER V6T 1W5/BC/CANADA/
Journal: EXPERIMENTAL PARASITOLOGY, 1990, V70, N4, P427-435
Language: ENGLISH Document Type: ARTICLE

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10102426 Genuine Article#: DA125 Number of References: 38
Title: SOLUBILIZATION OF PROTEIN AGGREGATES
Author(s): MARSTON FAO; HARTLEY DL
Corporate Source: CELLTECH LTD/SLOUGH SL1 4EN/BERKS/ENGLAND/; CTR INT RECH DANIEL CARASSO/F-92350 LE PLESSIS ROBINS//FRANCE/
Journal: METHODS IN ENZYMOLOGY, 1990, V182, P264-276
Language: ENGLISH Document Type: REVIEW

1/7/232
10086570 Genuine Article#: CZ487 Number of References: 33
Title: AN IMMUNOGENIC-MR 23,000 INTEGRAL MEMBRANE-PROTEIN OF SCHISTOSOMA-MANSONI WORMS THAT CLOSELY RESEMBLES A HUMAN TUMOR-ASSOCIATED ANTIGEN
Author(s): WRIGHT MD; HENKLE KJ; MITCHELL GF
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,IMMUNOPARASITOL UNIT/PARKVILLE/VIC 3050/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,IMMUNOPARASITOL UNIT/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF IMMUNOLOGY, 1990, V144, N8, P3195-3200
Language: ENGLISH Document Type: ARTICLE

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10086567 Genuine Article#: CZ487 Number of References: 52
Title: INDUCTION OF VIRUS-NEUTRALIZING ANTIBODIES BY BACTERIA EXPRESSING THE C3 POLIOVIRUS EPITOPE IN THE PERIPLASM - THE ROUTE OF IMMUNIZATION INFLUENCES THE ISOTYPIC DISTRIBUTION AND THE BIOLOGIC ACTIVITY OF THE ANTIPOLIOVIRUS ANTIBODIES
Author(s): LECLERC C; MARTINEAU P; VANDERWERF S; DERIAUD E; DUPLAY P; HOFNUNG M
Corporate Source: INST PASTEUR,BIOL REGULAT IMMUNITAIRES LAB,25 RUE DOCTEUR ROUX/F-75724 PARIS 15//FRANCE/; INST PASTEUR,CNRS,UNITE PROGRAMMAT MOLEC & TOXICOL GENET 271,INSERM,U163/F-75724 PARIS 15//FRANCE/; INST PASTEUR,CNRS,UNITE VIROL MOLEC 545/F-75724PARIS 15//FRANCE/
Journal: JOURNAL OF IMMUNOLOGY, 1990, V144, N8, P3174-3182
Language: ENGLISH Document Type: ARTICLE

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10086562 Genuine Article#: CZ487 Number of References: 32
Title: THE MAPPING OF AN ANTIBODY-BINDING REGION ON THE MYCOBACTERIUM-TUBERCULOSIS 19 KILODALTON ANTIGEN
Author(s): ASHBRIDGE KR; PRESTIDGE RL; BOOTH RJ; WATSON JD
Corporate Source: UNIV AUCKLAND,SCH MED,DEPT MOLEC MED/AUCKLAND//NEW ZEALAND/
Journal: JOURNAL OF IMMUNOLOGY, 1990, V144, N8, P3137-3142
Language: ENGLISH Document Type: ARTICLE

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10083872 Genuine Article#: CX760 Number of References: 32
Title: ENGINEERING PROTEINS FOR PURIFICATION
Author(s): SASSENFELD HM
Corporate Source: IMMUNEX CORP,51 UNIV ST/SEATTLE//WA/98101
Journal: TRENDS IN BIOTECHNOLOGY, 1990, V8, N4, P88-93
Language: ENGLISH Document Type: REVIEW

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10066730 Genuine Article#: CW921 Number of References: 21
Title: PARASITE ANTIGENS EXPRESSED IN ESCHERICHIA-COLI - A REFINED APPROACH FOR EPIDEMIOLOGIC ANALYSIS
Author(s): SCHERF A; MATTEI D; SCHREIBER M
Corporate Source: INST PASTEUR,UNITE PARASITOL EXPTL,25 RUE DR ROUX/F-75724 PARIS 15//FRANCE/; INST GENET/D-5000 COLOGNE 41//FED REP GER/
Journal: JOURNAL OF IMMUNOLOGICAL METHODS, 1990, V128, N1, P81-87
Language: ENGLISH Document Type: ARTICLE

1/7/237
10045383 Genuine Article#: CV477 Number of References: 26

Title: SCHISTOSOMA-JAPONICUM - MONOCLONAL-ANTIBODIES TO THE MR 26,000 SCHISTOSOME GLUTATHIONE S-TRANSFERASE (SJ26) IN AN ASSAY FOR CIRCULATING ANTIGEN IN INFECTED INDIVIDUALS
Author(s): DAVERN KM; TIU WU; SAMARAS N; GEARING DP; HALL BE; GARCIA EG; MITCHELL GF
Corporate Source: WALTER & ELIZA HALL INST MED RES/MELBOURNE/VIC 3050/AUSTRALIA/; UNIV PHILIPPINES,COLL PUBL HLTH,DEPT PARASITOL/MANILA 1000//PHILIPPINES/
Journal: EXPERIMENTAL PARASITOLOGY, 1990, V70, N3, P293-304
Language: ENGLISH Document Type: ARTICLE

1/7/238
10041319 Genuine Article#: CV047 Number of References: 27
Title: STRUCTURAL DIVERSITY IN THE 45-KILODALTON MEROZOITE SURFACE-ANTIGEN OF PLASMODIUM-FALCIPARUM
Author(s): SMYTHE JA; PETERSON MG; COPPEL RL; SAUL AJ; KEMP DJ; ANDERS RF
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; QUEENSLAND INST MED RES/BRISBANE/QLD/AUSTRALIA/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1990, V39, N2, P227-234
Language: ENGLISH Document Type: ARTICLE

1/7/239
10022509 Genuine Article#: CT966 Number of References: 53
Title: MYF-6, A NEW MEMBER OF THE HUMAN GENE FAMILY OF MYOGENIC DETERMINATION FACTORS - EVIDENCE FOR A GENE-CLUSTER ON CHROMOSOME-12
Author(s): BRAUN T; BOBER E; WINTER B; ROSENTHAL N; ARNOLD HH
Corporate Source: UNIV HAMBURG,SCH MED,DEPT TOXICOL,GRINDELALLEE 117/D-2000 HAMBURG 13//FED REP GER/
Journal: EMBO JOURNAL, 1990, V9, N3, P821-831
Language: ENGLISH Document Type: ARTICLE

1/7/240
09997457 Genuine Article#: CQ018 Number of References: 142
Title: MAPPING OF VIRAL EPITOPES WITH PROKARYOTIC EXPRESSION PRODUCTS
Author(s): LENSTRA JA; KUSTERS JG; VANDERZEIJST BAM
Corporate Source: STATE UNIV UTRECHT,FAC VET MED,INST INFECT DIS & IMMUNOL,POB 80165/3508 TD UTRECHT//NETHERLANDS/
Journal: ARCHIVES OF VIROLOGY, 1990, V110, N1-2, P1-24
Language: ENGLISH Document Type: REVIEW

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09984473 Genuine Article#: CP347 Number of References: 22
Title: ENHANCED SUPPRESSION OF HUMAN MYELOID LEUKEMIC-CELL LINES BY COMBINATIONS OF IL-6, LIF, GM-CSF AND G-CSF
Author(s): MAEKAWA T; METCALF D; GEARING DP
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,CANC RES UNIT/PARKVILLE/VIC 3050/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,CANC RES UNIT/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: INTERNATIONAL JOURNAL OF CANCER, 1990, V45, N2, P353-358
Language: ENGLISH Document Type: ARTICLE

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09965633 Genuine Article#: CM716 Number of References: 46
Title: PLASMODIUM-FALCIPARUM - 2 ANTIGENS OF SIMILAR SIZE ARE LOCATED IN DIFFERENT COMPARTMENTS OF THE RHOPTRY
Author(s): CREWTHER PE; CULVENOR JG; SILVA A; COOPER JA; ANDERS RF

Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; QUEENSLAND INST MED RES/HERSTON/QLD 4006/AUSTRALIA/
Journal: EXPERIMENTAL PARASITOLOGY, 1990, V70, N2, P193-206
Language: ENGLISH Document Type: ARTICLE

1/7/243
09961116 Genuine Article#: CM390 Number of References: 24
Title: CLONING, EXPRESSION AND NUCLEOTIDE-SEQUENCE OF THE GENE FRAGMENT ENCODING AN ANTIGENIC PORTION OF THE NUCLEOSIDE TRIPHOSPHATE HYDROLASE OF TOXOPLASMA-GONDII
Author(s): JOHNSON AM; ILLANA S; MCDONALD PJ; ASAI T
Corporate Source: FLINDERS UNIV,MED CTR,SCH MED,DEPT CLIN MICROBIOL/BEDFORD PK/SA 5042/AUSTRALIA/; TOKYO MED COLL,DEPT MICROBIOL,SHINJUKU KU/TOKYO160//JAPAN/
Journal: GENE, 1989, V85, N1, P215-220
Language: ENGLISH Document Type: NOTE

1/7/244
09942183 Genuine Article#: CL073 Number of References: 21
Title: CHARACTERIZATION OF SM20, A 20-KILODALTON CALCIUM-BINDING PROTEIN OF SCHISTOSOMA-MANSONI
Author(s): HAVERCROFT JC; HUGGINS MC; DUNNE DW; TAYLOR DW
Corporate Source: UNIV CAMBRIDGE,DEPT PATHOL,TENNIS COURT RD/CAMBRIDGE CB2 1QP//ENGLAND/
Journal: MOLECULAR AND BIOCHEMICAL PARASITOLOGY, 1990, V38, N2, P211-219
Language: ENGLISH Document Type: ARTICLE

1/7/245
09936473 Genuine Article#: CJ732 Number of References: 32
Title: EXPRESSION OF EPIDERMAL GROWTH-FACTOR RECEPTOR SEQUENCES AS ESCHERICHIA-COLI FUSION PROTEINS - APPLICATIONS IN THE STUDY OF TYROSINE KINASE FUNCTION
Author(s): KOLAND JG; OBRIEN KM; CERIONE RA
Corporate Source: CORNELL UNIV,NEW YORK STATE COLL VET MED,DEPT PHARMACOL/ITHACA//NY/14853; CORNELL UNIV,NEW YORK STATE COLL VET MED,DEPT PHARMACOL/ITHACA//NY/14853
Journal: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, 1990, V166, N1, P90-100
Language: ENGLISH Document Type: ARTICLE

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09919551 Genuine Article#: CJ425 Number of References: 45
Title: LIF - A MOLECULE WITH DIVERGENT ACTIONS ON MYELOID LEUKEMIC-CELLS AND EMBRYONIC STEM-CELLS
Author(s): GOUGH NM; WILLIAMS RL; HILTON DJ; PEASE S; WILLSON TA; STAHL J; GEARING DP; NICOLA NA; METCALF D
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; EUROPEAN MOLEC BIOL LAB/D-6900 HEIDELBERG//FED REP GER/
Journal: REPRODUCTION FERTILITY AND DEVELOPMENT, 1989, V1, N4, P281-288
Language: ENGLISH Document Type: ARTICLE

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09893288 Genuine Article#: CG102 Number of References: 38
Title: IMMOBILIZATION AND AFFINITY PURIFICATION OF RECOMBINANT PROTEINS USING HISTIDINE PEPTIDE FUSIONS
Author(s): LJUNGQUIST C; BREITHOLTZ A; BRINKNILSSON H; MOKS T; UHLEN M;

NILSSON B
Corporate Source: ROYAL INST TECHNOL,DEPT BIOCHEM & BIOTECHNOL/S-10044 STOCKHOLM 70//SWEDEN/; ROYAL INST TECHNOL,DEPT BIOCHEM & BIOTECHNOL/S-10044 STOCKHOLM 70//SWEDEN/
Journal: EUROPEAN JOURNAL OF BIOCHEMISTRY, 1989, V186, N3, P563-569
Language: ENGLISH Document Type: ARTICLE

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09818336 Genuine Article#: AZ578 Number of References: 22
Title: THE C-CBL PROTO-ONCOGENE IS PREFERENTIALLY EXPRESSED IN THYMUS AND TESTIS TISSUE AND ENCODES A NUCLEAR-PROTEIN
Author(s): LANGDON WY; HYLAND CD; GRUMONT RJ; MORSE HC
Corporate Source: INST MED & VET SCI,DIV HUMAN IMMUNOL/ADELAIDE/SA 5000/AUSTRALIA/; PO ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/VICTORIA//AUSTRALIA/; NIAID,IMMUNOPATHOL LAB/BETHESDA//MD/20892
Journal: JOURNAL OF VIROLOGY, 1989, V63, N12, P5420-5424
Language: ENGLISH Document Type: ARTICLE

1/7/249
09789286 Genuine Article#: AX105 Number of References: 29
Title: PRODUCTION OF LEUKEMIA INHIBITORY FACTOR IN ESCHERICHIA-COLI BY A NOVEL PROCEDURE AND ITS USE IN MAINTAINING EMBRYONIC STEM-CELLS IN CULTURE
Author(s): GEARING DP; NICOLA NA; METCALF D; FOOTE S; WILLSON TA; GOUGH NM; WILLIAMS RL
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; EUROPEAN MOLEC BIOL LAB/D-6900 HEIDELBERG//FED REP GER/
Journal: BIO-TECHNOLOGY, 1989, V7, N11, P1157-1161
Language: ENGLISH Document Type: ARTICLE

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09727459 Genuine Article#: AR531 Number of References: 30
Title: THE CELLULOSE-BINDING DOMAINS OF CELLULASES - TOOLS FOR BIOTECHNOLOGY
Author(s): ONG E; GREENWOOD JM; GILKES NR; KILBURN DG; MILLER RC; WARREN RA
Corporate Source: UNIV BRITISH COLUMBIA,DEPT MICROBIOL,300-6174 UNIV BLVD/VANCOUVER V6T 1W5/BC/CANADA/
Journal: TRENDS IN BIOTECHNOLOGY, 1989, V7, N9, P239-243
Language: ENGLISH Document Type: REVIEW

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09710738 Genuine Article#: AQ142 Number of References: 178
Title: BIOSPECIFIC INTERACTIONS - THEIR QUANTITATIVE CHARACTERIZATION AND USE FOR SOLUTE PURIFICATION
Author(s): WINZOR DJ; DEJERSEY J
Corporate Source: UNIV QUEENSLAND,DEPT BIOCHEM/ST LUCIA/QLD 4067/AUSTRALIA/
Journal: JOURNAL OF CHROMATOGRAPHY-BIOMEDICAL APPLICATIONS, 1989, V492, AUG , P377-430
Language: ENGLISH Document Type: REVIEW

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09700163 Genuine Article#: AP722 Number of References: 26
Title: MYOD IS A SEQUENCE-SPECIFIC DNA-BINDING PROTEIN REQUIRING A REGION OF MYC HOMOLOGY TO BIND TO THE MUSCLE CREATINE-KINASE ENHANCER
Author(s): LASSAR AB; BUSKIN JN; LOCKSHON D; DAVIS RL; APONE S; HAUSCHKA SD ; WEINTRAUB H
Corporate Source: FRED HUTCHINSON CANC RES CTR,DEPT GENET/SEATTLE//WA/98104

; UNIV WASHINGTON,DEPT BIOCHEM/SEATTLE//WA/98195
Journal: CELL, 1989, V58, N5, P823-831
Language: ENGLISH Document Type: ARTICLE

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09685490 Genuine Article#: AN225 Number of References: 26
Title: AUTOEPITOPES REACTIVE WITH ANTI-SS-B/LA
Author(s): WHITTINGHAM S; NASELLI G; MCNEILAGE LJ
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,BURNET CLIN RES UNIT/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: JOURNAL OF AUTOIMMUNITY, 1989, V2, N4, P345-351
Language: ENGLISH Document Type: ARTICLE

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09673874 Genuine Article#: AM547 Number of References: 43
Title: THE MOUSE TYPE-IV C-ABL GENE-PRODUCT IS A NUCLEAR-PROTEIN, AND ACTIVATION OF TRANSFORMING ABILITY IS ASSOCIATED WITH CYTOPLASMIC LOCALIZATION
Author(s): VANETTEN RA; JACKSON P; BALTIMORE D
Corporate Source: BRIGHAM & WOMENS HOSP,DIV HEMATOL/BOSTON//MA/02115; WHITEHEAD INST BIOMED RES/CAMBRIDGE//MA/02142; MIT,DEPT BIOL/CAMBRIDGE//MA/02139
Journal: CELL, 1989, V58, N4, P669-678
Language: ENGLISH Document Type: ARTICLE

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09600013 Genuine Article#: AF406 Number of References: 47
Title: IDENTIFICATION, USING SYNTHETIC PEPTIDES, OF THE MINIMUM AMINO-ACID SEQUENCE FROM THE RETROVIRAL TRANSMEMBRANE PROTEIN P15E REQUIRED FOR INHIBITION OF LYMPHOPROLIFERATION AND ITS SIMILARITY TO GP21 OF HUMAN T-LYMPHOTROPIC VIRUS TYPE-I AND TYPE-II
Author(s): RUEGG CL; MONELL CR; STRAND M
Corporate Source: JOHNS HOPKINS UNIV,SCH MED,DEPT PHARMACOL & MOLEC SCI/BALTIMORE//MD/21205; JOHNS HOPKINS UNIV,SCH MED,DEPT PHARMACOL & MOLEC SCI/BALTIMORE//MD/21205
Journal: JOURNAL OF VIROLOGY, 1989, V63, N8, P3250-3256
Language: ENGLISH Document Type: ARTICLE

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09593012 Genuine Article#: AE619 Number of References: 17
Title: ASSESSMENT OF THE PREVALENCE AND TITER OF ANTIBODIES TO A CANDIDATE SCHISTOSOMIASIS VACCINE MOLECULE, SJ26, IN SEVERAL HUMAN-SERUM BANKS
Author(s): LIGHTOWLERS MW; MITCHELL GF
Corporate Source: UNIV MELBOURNE,CTR VET CLIN,MOLEC PARASITOL LAB,PRINCES HIGHWAY/WERRIBEE/VIC 3030/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: ACTA TROPICA, 1989, V46, N4, P229-238
Language: ENGLISH Document Type: ARTICLE

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09558931 Genuine Article#: AC450 Number of References: 26
Title: INTEGRAL MEMBRANE-PROTEIN LOCATED IN THE APICAL COMPLEX OF PLASMODIUM-FALCIPARUM
Author(s): PETERSON MG; MARSHALL VM; SMYTHE JA; CREWTHER PE; LEW A; SILVA A ; ANDERS RF; KEMP DJ
Corporate Source: POST OFF ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/MELBOURNE/VIC 3050/AUSTRALIA/
Journal: MOLECULAR AND CELLULAR BIOLOGY, 1989, V9, N7, P3151-3154

Language: ENGLISH Document Type: NOTE

1/7/258
09508621 Genuine Article#: U7923 Number of References: 24
Title: ENZYME IMMOBILIZATION USING THE CELLULOSE-BINDING DOMAIN OF A CELLULOMONAS-FIMI EXOGLUCANASE
Author(s): ONG E; GILKES NR; WARREN RAJ; MILLER RC; KILBURN DG
Corporate Source: UNIV BRITISH COLUMBIA,DEPT MICROBIOL,300-6174 UNIV BLVD/VANCOUVER V6T 1W5/BC/CANADA/
Journal: BIO-TECHNOLOGY, 1989, V7, N6, P604-607
Language: ENGLISH Document Type: ARTICLE

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09436986 Genuine Article#: U0456 Number of References: 16
Title: GLUTAGENE - A COMMERCIAL SPIN-OFF FROM IMMUNOPARASITOLOGY
Author(s): SAMARAS N; STOCKER JW; MITCHELL GF
Corporate Source: AMRAD CORP LTD,6-663 VICTORIA ST/ABBOTSFORD/VIC3067/AUSTRALIA/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: SEARCH, 1988, V19, N5-6, P265-266
Language: ENGLISH Document Type: ARTICLE

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09400785 Genuine Article#: U1120 Number of References: 21
Title: VACCINATION AGAINST OVINE CYSTICERCOSIS USING A DEFINED RECOMBINANT ANTIGEN
Author(s): JOHNSON KS; HARRISON GBL; LIGHTOWLERS MW; OHOY KL; COUGLE WG; DEMPSTER RP; LAWRENCE SB; VINTON JG; HEATH DD; RICKARD MD
Corporate Source: UNIV MELBOURNE,CTR VET SCI CLIN,PRINCES HIGHWAY/WERRIBEE/VIC 3030/AUSTRALIA/; COOPERS ANIM HLTH NZ LTD/UPPER HUTT//NEW ZEALAND/; MAFTECH,WALLACEVILLE RES CTR/UPPER HUTT//NEW ZEALAND/
Journal: NATURE, 1989, V338, N6216, P585-587
Language: ENGLISH Document Type: ARTICLE

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09400612 Genuine Article#: U0423 Number of References: 17
Title: COLORIMETRIC DETECTION OF SPECIFIC DNA SEGMENTS AMPLIFIED BY POLYMERASE CHAIN REACTIONS
Author(s): KEMP DJ; SMITH DB; FOOTE SJ; SAMARAS N; PETERSON MG
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/; AMRAD CORP/PARKVILLE/VIC 3067/AUSTRALIA/
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1989, V86, N7, P2423-2427
Language: ENGLISH Document Type: ARTICLE

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09314174 Genuine Article#: T2890 Number of References: 20
Title: FUSION TO AN ENDOGLUCANASE ALLOWS ALKALINE-PHOSPHATASE TO BIND TO CELLULOSE
Author(s): GREENWOOD JM; GILKES NR; KILBURN DG; MILLER RC; WARREN RAJ
Corporate Source: UNIV BRITISH COLUMBIA,DEPT MICROBIOL,300-6174 UNIV BLVD/VANCOUVER V6T 1W5/BC/CANADA/
Journal: FEBS LETTERS, 1989, V244, N1, P127-131
Language: ENGLISH Document Type: ARTICLE

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09307755 Genuine Article#: T2457 Number of References: 37
Title: GLUTATHIONE S-TRANSFERASES - POTENTIAL COMPONENTS OF ANTI-SCHISTOSOME VACCINES
Author(s): MITCHELL GF
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: PARASITOLOGY TODAY, 1989, V5, N2, P34-37
Language: ENGLISH Document Type: ARTICLE

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09240907 Genuine Article#: R6831 Number of References: 28
Title: SENSITIZATION AGAINST THE PARASITE ANTIGEN SJ26 IS NOT SUFFICIENT FOR CONSISTENT EXPRESSION OF RESISTANCE TO SCHISTOSOMA-JAPONICUM IN MICE
Author(s): MITCHELL GF; GARCIA EG; DAVERN KM; TIU WU; SMITH DB
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,IMMUNOPARASITOL UNIT/PARKVILLE/VIC 3050/AUSTRALIA/; UNIV PHILIPPINES MANILA,COLL PUBL HLTH,DEPT PARASITOL/ERMITA 2801//PHILIPPINES/
Journal: TRANSACTIONS OF THE ROYAL SOCIETY OF TROPICAL MEDICINE AND HYGIENE , 1988, V82, N6, P885-889
Language: ENGLISH Document Type: ARTICLE

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09185159 Genuine Article#: R3639 Number of References: 31
Title: MYELOID-LEUKEMIA INHIBITORY FACTOR MAINTAINS THE DEVELOPMENTAL POTENTIAL OF EMBRYONIC STEM-CELLS
Author(s): WILLIAMS RL; HILTON DJ; PEASE S; WILLSON TA; STEWART CL; GEARING DP; WAGNER EF; METCALF D; NICOLA NA; GOUGH NM
Corporate Source: EUROPEAN MOLEC BIOL LAB,MEYERHOFSTR 1/D-6900 HEIDELBERG//FED REP GER/; ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES/PARKVILLE/VIC 3050/AUSTRALIA/
Journal: NATURE, 1988, V336, N6200, P684-687
Language: ENGLISH Document Type: ARTICLE

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09166853 Genuine Article#: R0962 Number of References: 31
Title: MOLECULAR AND SEROLOGICAL CHARACTERISTICS OF THE GLUTATHIONE S-TRANSFERASES OF SCHISTOSOMA-JAPONICUM AND SCHISTOSOMA-MANSONI
Author(s): TIU WU; DAVERN KM; WRIGHT MD; BOARD PG; MITCHELL GF
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,IMMUNOPARASITOL UNIT/PARKVILLE/VIC 3050/AUSTRALIA/; AUSTRALIAN NATL UNIV,JOHN CURTIN SCH MED RES/CANBERRA/ACT 2601/AUSTRALIA/
Journal: PARASITE IMMUNOLOGY, 1988, V10, N6, P693-706
Language: ENGLISH Document Type: ARTICLE

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09060749 Genuine Article#: Q3585 Number of References: 27
Title: PRIMARY STRUCTURE OF THE HUMAN M2 MITOCHONDRIAL AUTO-ANTIGEN OF PRIMARY BILIARY-CIRRHOSIS - DIHYDROLIPOAMIDE ACETYLTRANSFERASE
Author(s): COPPEL RL; MCNEILAGE LJ; SURH CD; VANDEWATER J; SPITHILL TW; WHITTINGHAM S; GERSHWIN ME
Corporate Source: ROYAL MELBOURNE HOSP,WALTER & ELIZA HALL INST MED RES,ROYAL PARADE/PARKVILLE/VIC 3050/AUSTRALIA/; UNIV CALIF DAVIS,DIV RHEUMATOL ALLERGY & CLIN IMMUNOL/DAVIS//CA/95616
Journal: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, 1988, V85, N19, P7317-7321
Language: ENGLISH Document Type: ARTICLE

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